National Institute on Drug Abuse

Research 86

MONOGRAPH SERIES

Compulsory Treatment of Drug Abuse: Research and Clinical Practice

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES • Public Health Service • National Institutes of Health

Compulsory Treatment of Drug Abuse: Research and Clinical Practice

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NIDA Research Monograph 86

1988

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
National Institutes of Health

National Institute on Drug Abuse
5600 Fishers Lane
Rockville, MD 20657

For sale by the Suprintendent of Documents, U.S. Government Printing Office
Washington, DC 20402

NIDA Research Monographs are prepared by the research divisions of the National Institute on Drug Abuse and published by its Office of Science. The primary objective of the series is to provide critical reviews of research problem areas and techniques, the content of state-of-the-art conferences, and integrative research reviews. Its dual publication emphasis is rapid and targeted dissemination to the scientific and professional community.

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NIDA Research Monograph Series

Parklawn Building, 5600 Fishers Lane, Rockville, Maryland 20857

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ACKNOWLEDGMENT

This monograph is based upon papers and discussion from a technical review on civil commitment for drug abuse which took place on January 26 and 27, 1987, in Rockville, MD. The review meeting was sponsored by the Office of Science and the Division of Clinical Research, National Institute on Drug Abuse.

National Institute on Drug Abuse
NIH Publication No. 94-3713
Formerly DHHS Publication No. (ADM) 88-1578
Printed 1988 Reprinted 1994

NIDA Research Monographs are indexed in the Index Medicus. They are selectively included in the coverage of American Statistics Index, Biosciences Information Service, Chemical Abstracts, Current Contents, Psychological Abstracts, and Psychopharmacology Abstracts.

Contents

An Introduction to Compulsory Treatment for Drug Abuse: Clinical Practice and Research

Carl G. Leukefeld and Frank M. Tims

INTRODUCTION

Civil commitment as a form of compulsory treatment for the treatment of drug abusers has been legally possible in the United States in the last 25 years (California Civil Addict Program, New York State Civil Commitment, and the Federal Narcotic Addict Rehabilitation Act (NARA)). The focus of civil commitment procedures has been on the compulsive drug abusers, especially antisocial addicts responsible for committing large numbers of criminal acts. Today the concept has been suggested, by individuals in both the drug abuse and criminal justice fields, for users of intravenous drugs, who are at risk for contracting and transmitting the acquired immunodeficiency syndrome (AIDS) virus and who are unwilling to enter treatment voluntarily. The concept of compulsory treatment as a mechanism for reducing the prevalence of drug abuse and the consequences of that abuse, for both those individuals and U.S. society at large, is not new. Compulsory treatment may be defined as activities that increase the likelihood that drug abusers will enter and remain in treatment, change their behavior in a socially desirable way, and sustain that change. While the implementation and outcomes of the above civil commitment programs differ to some extent, their intent and enabling legislation were quite similar, as were their commitment procedures. Their purpose was to control and rehabilitate the compulsive drug abuser by providing drug abuse treatment, monitoring drug use, and providing reasonable sanctions for program infractions.

Although the Federal and State civil commitment programs were only in full operation for about a decade, 1965 to 1975, and were replaced by a system of community drug treatment programs, the desire for community programs to induce larger numbers of addicts into

treatment and the high number of prisoners with addiction histories suggest that civil commitment be reexamined. Concern about the spread of AIDS among intravenous drug abusers and from intravenous drug abusers to their sexual partners and children has given renewed impetus to such reexamination.

The relationship between heroin addiction and crime is well established (Anglin, this volume; Nurco 1986). Likewise, the relationship of intravenous drug use and AIDS is well established, with 25 percent of all AIDS cases related to intravenous drug use. This review presents the convergence of knowledge regarding drug abuse treatment effectiveness with the emergence of the current AIDS problem among intravenous drug abusers. AIDS is spreading among intravenous drug abusers through sharing of needles contaminated with the human immunodeficiency virus (HIV). Through this sharing of needles, it is believed that the vast majority of needle-using addicts are at risk for contracting AIDS.

AIDS AND INTRAVENOUS DRUG USE

Currently, AIDS among intravenous drug abusers is largely confined to the New York City/northern New Jersey metropolitan area, with lesser concentrations in California, Florida, and Texas. The current concentration of AIDS appears to be a temporal phenomenon—rates are highest in those communities where AIDS was first detected. Once introduced among intravenous drug abusers in a community, infection spreads very rapidly. For example, the AIDS virus has been detected in stored sera. First recognized among intravenous drug abusers in New York City in 1978, infection rates were established at 40 percent in 1980 from stored blood and 60 percent in the latter part of 1986. Rates of infection appear to be low in most of the country, yet significant rates of infection are beginning to emerge in some areas. With time, AIDS prevalence among intravenous drug abusers is expected to increase rapidly in cities across the United States.

The Public Health Service and the National Institute on Drug Abuse (NIDA) have identified intravenous drug abusers as a major source for the spread of AIDS to the heterosexual population. While data on heterosexual AIDS transmission is incomplete, there is some indication that transmission may occur fairly readily, at least among regular sexual partners of persons with AIDS. Since many intravenous drug abusers are sexually active, and since many female abusers resort to prostitution to support their drug habits, the potential for the spread

of AIDS from intravenous drug abusers to the general population is considerable, especially as HIV infection becomes more widespread among intravenous drug abusers. This potential is of serious concern for health-care delivery and drug abuse treatment programs, and for the criminal justice system as well.

TREATMENT EFFECTIVENESS FOR INTRAVENOUS DRUG USERS

NIDA has sponsored research that suggests that treatment for drug abuse is effective (Tims 1981; Tims and Ludford 1984). Clients entering drug-free outpatient (counseling) programs, drug-free residential (therapeutic community) treatment, and methadone maintenance treatment generally experience dramatic reductions in drug use and associated criminality. Many studies also show improvement in employment status and other behavioral outcomes among treated drug abusers, The question of which treatment is superior becomes clouded by the prevailing pattern for clients who have multiple treatment experiences, often in more than one type of program, before becoming abstinent from their principal drug of abuse. This pattern of multiple treatments is reflected in a study by Simpson and Sells (1982), in which opioid addicts were followed over a 6-year period after admission to treatment. By the sixth year, 61 percent of these addicts were opioid abstinent and had been so for at least 1 year. Treatment figured prominently in the attainment of stable abstinence patterns, with about 80 percent of those abstinent having achieved this status directly in connection with a treatment episode. In addition to the 61 percent who were abstinent, 18 percent had given up daily opioid use but had other problems such as occasional opioid use, heavy use of nonopioids or alcohol, or long-term incarceration. Thus, even though a significant number of clients had other problems, only one-fifth of those treated continued their pretreatment levels of opioid use at 6 years after leaving treatment.

Relapse prevention is an important component of treatment programming, and is the subject of ongoing research (Marlatt and George 1984; Tims and Leukefeld 1986). The greatest risk of relapse after leaving treatment occurs during the first 90 days, at a time when clients are exposed to drug-related stimuli, without the support of a structured program to help resolve their conflicts. For this reason, aftercare programs have been developed to follow up individuals in the community, and to provide a resource to assist in maintaining the client's commitment to abstinence. Aftercare models include self-help groups, such as Narcotics Anonymous, and approaches that stress the development of coping skills through professionally guided self-help

training groups. Also, cognitive-behavioral models such as those developed by Brownell et al. (1986) include coping strategies and development of more effective perspectives on drug use "slips" and relapse. Civil commitment programs also include a lengthy aftercare component.

THE ROLE OF CIVIL COMMITMENT IN TREATMENT AND AIDS CONTAINMENT

Recognizing that about 25 States have an existing civil commitment statute, a panel of drug abuse treatment researchers met in January 1987 to examine the demand-reduction potential, clinical and therapeutic value, as well as costs/benefits associated with civil commitment for drug abusers from a public health perspective. The review was to be the first meeting. After identifying the scientific base during this meeting, additional efforts might focus on the pre- and postadjudicatory mechanisms for mandatory treatment as well as on national policy implications of compulsory treatment and civil commitment.

The initial review was organized into five parts. Dr. Douglas Anglin reviews data from several evaluations he completed on the California Civil Addict Program. Dr. James Maddux, a former medical officer in charge of the U.S. Public Health Service Fort Worth Narcotic Hospital, reviews followup studies that compare compulsory followup treatment and voluntary treatment of addicts released from the Public Health Service hospitals in Fort Worth, TX and Lexington, KY. It was suggested that emphasis be placed on what has been learned from existing studies. Three major issues suggested for inclusion were:

(1) When is legal coercion therapeutically useful?

(2) What is legal coercion's value in reducing the "contagious" aspects of the drug-using lifestyle?

(3) Where and how has compulsory treatment and civil commitment/legal coercion been used in the past?

It was also suggested that emphasis be placed on background, overview, settings, and specific methodologies that are available for better understanding compulsory treatment and civil commitment.

The first section, or group of papers, sets the stage with an overview of compulsory treatment, civil commitment, court referral, and other forms of legal coercion for drug abuse treatment.

The second section reviews long-term treatment evaluation studies by focusing on the influence of judicial status—including probation, parole, and mandatory release—on drug abuse, criminal behavior, and related outcomes during and after treatment. Presentations included longitudinal study results pertinent to compulsory treatment. A description of the rationale, strengths, limitations, and generalizability of findings is also incorporated. Dr. Robert Hubbard provides an examination of clients involved in the Treatment Outcome Prospective Study (TOPS), which confirms previous studies related to retention in treatment and motivation by clients referred from the criminal justice system and, more specifically, by Treatment Alternatives to Street Crime (TASC). Dr. D. Dwayne Simpson reports on the influence of pretreatment legal status 12 years after treatment for a group of male addicts.

The third section reviews efficacy studies that focus on civil commitment, legal coercion, and court referral and highlights research results and findings. The impact of civil commitment on treatment outcomes and retention in treatment is stressed. Ms. Beth Weinman describes TASC and discusses several evaluations of TASC. Dr. Herman Joseph presents an historical perspective which focuses on probation activities and diversion programs in New York City. Dr. James Inciardi recalls his personal experiences as a staff member in the New York Narcotics Addiction Control Commission, which had responsibility for implementing the New York State Civil Commitment Program. Dr. Eric Wish describes four approaches for identifying drug abuse in the criminal justice system. Dr. George De Leon reports on the linkage of therapeutic communities with the criminal justice system and reviews data related to the effectiveness of therapeutic communities. Dr. John Ball completes the presentations in this group of papers by providing information from his study of methadone maintenance programs.

The fourth section focuses on the costs and potential benefits from civil commitment studies and related research. Dr. Barry Brown examines civil commitment from the international perspective and reports that little is known about costs and related benefits for civil commitment internationally. He reviews the status of civil commitment in 43 countries. Dr. Henrick Harwood presents cost-benefit

information focused on TASC and other criminal justice system programs.

Finally, the last section includes consensus statements of current knowledge. In addition, the final section includes areas for future research, which were developed during the consensus process. Consensus development used the following issues as a frame of reference:

- Based upon the literature, how can the civil commitment process be improved? Are there viable alternative models to civil commitment which might be more productive/efficient from a clinical/public health perspective?

- What major research questions, strategies, and design features should be incorporated into evaluative studies of compulsory treatment and, more specifically, civil commitment?

- What is the potential of compulsory treatment and civil commitment for curbing the spread of AIDS?

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The Efficacy of Civil Commitment in Treating Narcotic Addiction

M. Douglas Anglin

INTRODUCTION

Civil commitment approaches to the control of narcotics addiction are not new. The United States Public Health Service (USPHS) hospitals in Fort Worth and Lexington represented an early attempt at enforced treatment. Findings from the USPHS efforts in this respect are reviewed by Maddux in this volume.

Before renewed consideration can be given to the compulsory commitment of drug addicts for treatment, it is crucial to determine whether such treatment can be effective in reducing addiction, or at least in minimizing the adverse social consequences of addiction. There have been only a few studies that have addressed this question, and the empirical evidence derived from most of them has been equivocal. Most commitment programs implemented over the last 20 years were based more on the hope that treatment would be effective than on consistent and objective demonstration of efficacy.

In order to demonstrate conclusively whether enforced, or compulsory, treatment is effective, William H. McGlothlin and I conducted an evaluation of the California Civil Addict Program (CAP), the first true civil commitment program implemented in the United States (McGlothlin et al. 1977).

BACKGROUND

The initial study was performed during 1974, 1975, and 1976. Nearly 1,000 individuals admitted to the California CAP from 1962 to 1964 for a 7-year period of commitment were selected for followup. For a full description of the California CAP, see McGlothlin et al. 1977.

For other research results, see Anglin and McGlothlin 1984 and Anglin, in press. Subsequently, in 1978, the combined effects of civil commitment and methadone maintenance on another sample of approximately 300 CAP admissions were studied (Anglin et al. 1981).

The first CAP study took advantage of a natural experiment that was inadvertently created during the initial years of the program. The laws creating the CAP were passed in 1961, and the program actually began late in 1962. However, judges and other officials involved in the initial implementation of the program were not very clear about commitment procedures and thus made many procedural mistakes. In the first 18 months of the program, therefore, nearly half the individuals admitted were released on a writ of habeas corpus after minimal exposure to the inpatient component.

This group thus encompassed people who were eligible for the program and who had the same characteristics as others admitted to the program, but who, because of what was apparently a semi-random process, were released after only a short time because of procedural errors.

To take advantage of these circumstances, a treatment sample of individuals was selected. These individuals had stayed in the program for at least one inpatient stay and a subsequent release to supervised community release, or outpatient status (OPS), and were matched with individuals from among the group who had writted out. A time series approach was used to study the data obtained from following up these two groups.

OVERALL OUTCOMES OF CML COMMITMENT

Figure 1 is a time series graph from the original study. The dependent variable was the percentage of time during each year that narcotics were used on a daily basis. The solid line represents the group that was admitted to the California Rehabilitation Center, which is the inpatient facility for the CAP. The treatment sample consisted of those who achieved at least one outpatient release. Many of these, in fact, remained in the program for the full term. The broken line represents those admissions who writted out after minimal exposure to the program. They comprised the comparison group. The break in the lines corresponds to the admission date to the CAP. Eight years of preadmission data and 11 to 13 years of postadmission data were obtained during the followup interviews.

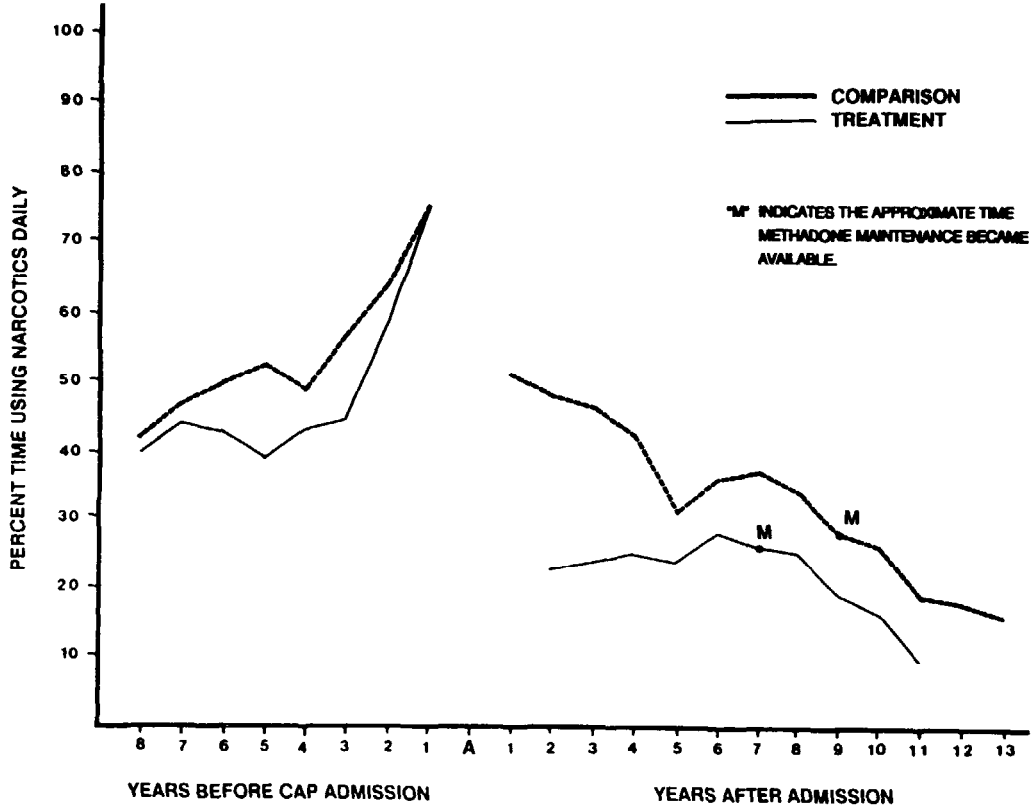

FIGURE 1. *Percent of nonincarcerated time using narcotics daily: CAP treatment and comparison samples*

For part of the preadmission period, the treatment group reported somewhat less daily narcotic use than did the comparison group. On the whole, members of the treatment group spent an average of a little over 40 percent of their time using narcotics daily before the 2 years immediately preceding commitment, compared to an average of slightly less than 50 percent for the comparison group. For the 2 years before admission to the CAP, however, addiction levels for both groups were "out of control," and there was a sharp and converging rise in the daily use of narcotics.

In the first year after release from treatment (either by writ or by release to OPS), there was a sharp separation between the two groups, with the comparison group using narcotics daily at a much higher rate. Among the treatment group, an immediate and dramatic drop occurred in daily narcotic use, which was sustained over the 5-year period when most of the group were under supervision in the CAP. After year 5, a time-related attenuation was evident, which was associated with other social interventions and with maturing out (Winick 1962). The comparison group showed a time-related attenuation over the entire postadmission period, eventually converging toward the treatment group level by year 5.

Years 6, 7, and 8 show increased daily use levels by both groups. Chronologically, that period occurred during a heroin epidemic in the United States in the early 1970s. This concomitant increase in levels of daily use by both CAP groups provides strong evidence that consumption of heroin is directly related to availability of the drug.

Based on this time series data, it is clear that civil commitment has an important and dramatic effect on suppressing daily heroin use by narcotics addicts. However, the program was not just concerned with narcotic use per se; it was also intended to affect addiction-related behaviors, particularly those with adverse social consequences.

Figure 2 is a graph showing the reported percentage of time each group engaged in property crime activities. Prior to admission, both groups spent comparable amounts of time involved in the commission of property crime. As before, a sharp and sustained reduction was observed after admission for the treatment group, whereas the comparison group shows only a time-related attenuation.

The differences observed in figures 1 and 2 must be considered as minimal measures of the effects of civil commitment. In many

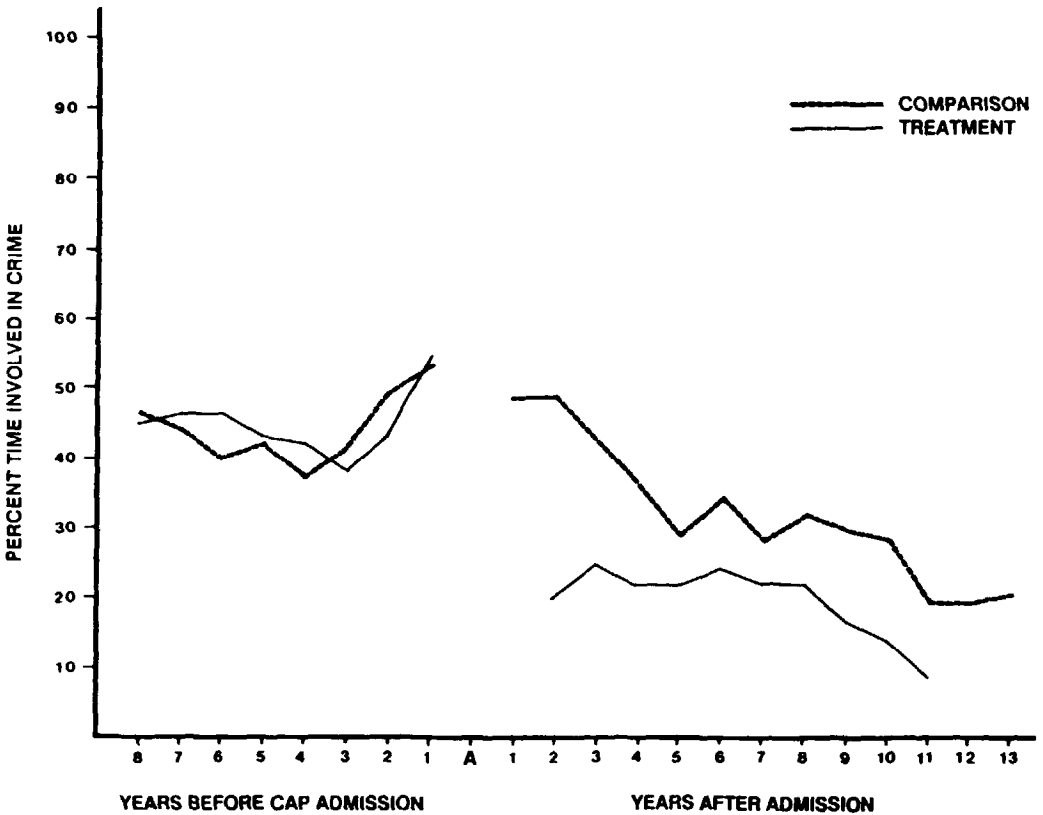

FIGURE 2. *Percent of nonincarcerated time involved in property crime; CAP treatment and comparison samples*

cases, individuals in the comparison group were not totally free of legal supervision. Some were on parole or probation or were subject to other types of supervision that also suppressed their narcotic use and criminal behavior. Had this not been the case, their use levels and crime rate would undoubtedly have been higher. Thus, the difference between the curves gives only a minimum estimate of the effectiveness of civil commitment.

Table 1 presents a complete set of dependent variables for both groups, including employment, time spent dealing drugs, and so forth. All these measures show similar effects to those observed in figures 1 and 2 for daily narcotics use and for property crime involvement. However, as the behavior or measure becomes more prosocial, the effect becomes less dramatic. Statistically significant increases in employment were observed, for example, but the change was not nearly as large as were reductions in antisocial behavior.

Table 1 shows the difference between the precommitment to postcommitment change in status and behavior for the treatment group and the corresponding change for the comparison group. These data take into account the initial precommitment levels of the variables and determine the net difference in change scores for the two samples, i.e., [comparison group postcommitment minus comparison group precommitment] minus [treatment group postcommitment minus treatment group precommitment].

Three periods are considered. Period I is the interval from time of first narcotic use (N1) to civil commitment admission (A). Period II is the 7 years after commitment, A to (A + 7), corresponding to the full commitment term. Period III is the interval from A + 7 to the interview (I), when, except for extended commitments, most of the treatment group had been discharged from the CAP.

It must be noted that period II is defined on a purely chronological basis, so that it represents the intended period of legal commitment. Such a definition again gives a minimal estimate of the efficacy of civil commitment, because a large minority of the treatment group was released from CAP supervision before the imposed commitment period expired. Reasons for early release included a determination as unfit for treatment, incarceration for criminal offenses, and, less often, graduation in good standing.

To test the sample differences for statistical significance, the data are expressed in terms of the means of the individual measures. The

TABLE 1. *Summary of mean precommitment and postcommitment status and behavior for comparison (C) and treatment (T) samples*

Status or Behavior	Comparison Period			Treatment Period			Mean Differences Between Change Scores $(T_{II}-T_I)-(C_{II}-C_I)$		$(T_{III}-T_I)-(C_{III}-C_I)$	
	I	II	III	I	II	III	Diff.	T-Ratio	Diff.	T-Ratio
Mean Arrests per Year[1]										
Drug Arrests	1.06	0.95	0.67	0.83	0.53	0.70	-.19	1.69	0.26	1.27
Nondrug Arrests	1.13	1.18	0.90	1.15	0.80	0.72	-.40	2.82^{+}	-.20	1.29
Parole Violations	0.10	0.31	0.32	0.12	0.67	0.16	0.34	5.34^{+}	-.18	2.69^{+}
Mean Percent of Time Incarcerated	23.2	50.9	31.7	20.7	50.5	24.5	2.1	0.91	-4.7	1.56
Mean Percent of Nonincarcerated Time										
Under Legal Supervision	31.7	52.6	60.0	35.4	86.1	44.2	29.8	7.16^{+}	-19.5	4.05^{+}
Using Narcotics Daily	54.5	47.7	28.4	52.8	31.0	20.9	-15.0	3.88^{+}	-5.8	1.49
Dealing Drugs (With or Without Profit)	46.9	38.2	25.1	42.1	28.2	18.4	-5.3	1.41	-1.9	0.47
Employed (Full or Part Time)	44.8	48.8	53.0	50.3	61.5	61.1	7.2	2.09*	2.6	0.65
Heavy Alcohol Use[2]	30.0	36.8	37.4	36.2	39.7	45.5	-3.3	0.88	1.9	0.43
Criminal Activities	49.8	43.1	30.5	47.2	28.6	21.0	-11.9	2.91^{+}	-6.9	1.46
Mean Number Self-Reported Crimes/Year[1]	66	77	52	70	44	33	-36	3.29^{+}	-23	1.88
Mean Income ($00) From Crime/Year[1]	45	72	48	49	45	30	-32	2.93^{+}	-23	2.06*

TABLE 1. (Continued)

Status or Behavior	Comparison			Treatment			Mean Differences Between Change Scores			
	Period			Period			$(T_{II}-T_I)-(C_{II}-C_I)$		$(T_{III}-T_I)-(C_{III}-C_I)$	
	I	II	III	I	II	III	Diff.	T-Ratio	Diff.	T-Ratio
Composite Score: Percent of Time Alive, Not Incarcerated, and Not Using Narcotics Daily	35.3	27.9	45.9	36.6	36.1	57.2	6.9	2.49*	10.0	2.72+

*p>.05

+p>.01

[1]Data on arrests, self-reported crimes, and income from crime are rates per nonincarcerated person-year. Crime income does not include drug dealing, gambling. etc.

[2]Heavy alcohol use is defined as drinking a six-pack of beer, or a bottle of wine, or seven drinks of liquor over a 6-hour period two or more times per week.

NOTE: Period I=First narcotic use (N1) to civil commitment (A); Period II=A to (A + 7 years). the legislated period of commitment; Period III=(A + 7 years) to time of interview (I). The percentages in this table are the mean of individual percentages for the respective periods. not the percentage of the overall parson-months.

SOURCE: McGlothlin et al. 1977.

right half table 1 shows the difference between the change scores and the corresponding t-ratio. For example, the difference between drug arrest change scores between periods I and II is:

$$(T_{II}-T_I)-(C_{II}-C_I)=(.53-0.83)(-0.95-1.06)=-0.19.$$

Thus, the decrease in the drug arrest rate from preadmission, period I, to postadmission, period II, for the treatment group was about 19 percent more than the corresponding change for the comparison group. There was also a 40 percent greater reduction in nondrug arrests. There was, however, an expected increase in parole violations (34 percent larger), because members of the treatment group were on a lengthy supervised outpatient status and so were at risk for administrative violation more often than the comparison group. It should be noted that the violation increase did not even reach the level of decrease in nondrug arrests, and certainly not the decrease in the nondrug and drug arrests combined. Clearly, the CAP benefited other agencies in the CJS by reducing criminal activity and by handling individuals under civil commitment authority internally rather than by instituting new and costly legal proceedings.

In general, members of the treatment group spent about 2 percent more time incarcerated during the aftercare period, a negligible difference. They spent 29 percent more time under legal supervision, an expected difference because supervised community aftercare is a strong component of the CAP. Their daily narcotic use was down 15 percent more. Their criminal activities were down by 12 percent more if percent of time involved in property crime was the measure, but were down 36 percent more when the number of crimes committed was the measure, and down 32 percent more when mean income from crime was the measure. Their dealing was down 5 percent more, their employment was up by 7 percent more, and their alcohol abuse was down 3 percent more (not statistically significant). For a composite score—the percentage of time alive, not incarcerated, and not using drugs daily—the change in the treatment group was 7 percent higher than the comparison group. Except for the daily narcotic use and crime reductions, these changes were moderate for the most part.

EFFECTIVE ELEMENTS OF CIVIL COMMITMENT

What is the component of civil commitment that produces the greatest effect? While some period of inpatient care may be necessary in the majority of cases, it is apparently the close

community supervision, with objective narcotics testing, that is most important. To test the assumption that the level of legal supervision makes a critical difference in daily narcotic use, the data was aggregated into periods when the subjects were under different types of supervision. Figure 3 presents the results for daily narcotic use.

Before 1960, only data for no supervision and various legal supervisions (e.g., probation or parole) without drug testing was available for our subjects. The graphs for these two conditions are very similar. After 1960, sufficient data were available to construct graphs for legal supervision with testing and for abscondence from supervised conditions. After 1964, OPS data became available. OPS differed from other legal supervisions with testing because of specially trained parole officers, smaller case loads, and more frequent drug testing.

It is clear that the level of supervision exemplified by OPS produced the best results in reducing daily narcotic use for each of the 2-year intervals for which data were available. The next most effective approach over all the periods, although it fluctuated somewhat more, was legal supervision with testing. The least effective, as might be expected, was absconded status. In this condition, individuals under supervision either rejected the degree of control exercised by their parole officers, or got out of control in their drug use or other behavior, and fled rather than wait for violation to occur.

Data from absconded periods are important because addicts in abscondence represent a failure of the CJS to maintain control. Absconding also becomes more common as controls become stricter. Thus, it is necessary to balance the level of constraint that supervision places on addicts against the likelihood that they will abscond if the control becomes too severe.

In its initial 6 to 8 years, the CAP was a very stringent program. Addicts spent an average of 18 months incarcerated in the inpatient phase. They were then released to the aftercare, or outpatient, phase where they were closely and severely monitored to induce them to remain drug free. The popular expression of parole agents was "You use, you lose." Outpatients who were detected in any narcotic use violations were usually returned to the institution for another incarceration period.

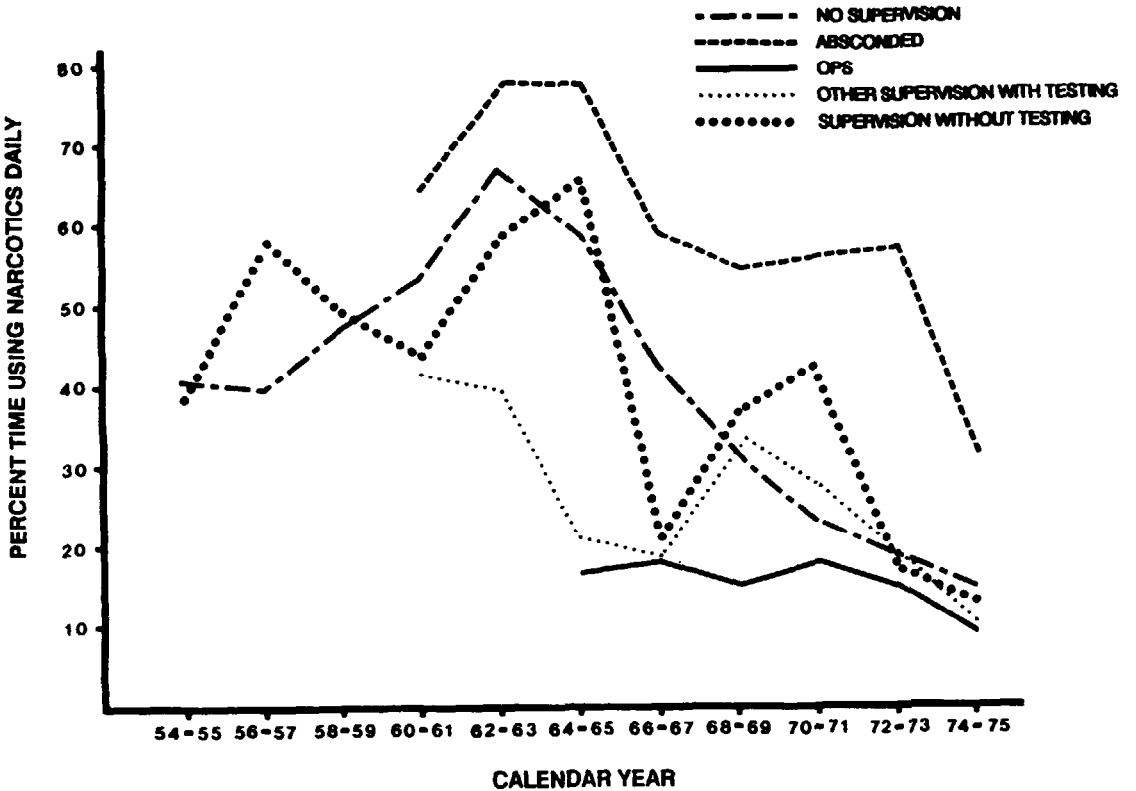

FIGURE 3. *Percent of nonincarcerated time using narcotics daily as a function of legal supervisory status; total CAP sample*

In the 1970s, the program became more liberal, in both its inpatient and outpatient requirements. The initial inpatient stays became shorter and addicts who used drugs or otherwise violated parole conditions were reincarcerated for a limited placement of 36 to 60 days. In the OPS phase, some infrequent drug use was tolerated if the overall behavioral pattern of the addict was acceptable.

Although not presented here, our research findings for a 1970 CAP treatment sample showed poorer outcomes resulting from these policy changes (McGlothlin et al. 1977). Nevertheless, after the increasing popularity of methadone maintenance (MM) in the 1970s, this later CAP treatment sample performed as well as the earlier CAP treatment group because a substantial minority entered MM.

While the more frequent and consistent OPS monitoring of the earlier period was also more effective, for both program periods it was clear that rigid application of policies that routinely returned individuals to inpatient care could result in poorer outcomes for some (Jamison and McGlothlin, in press). The best approach appeared to be a flexible relationship between the parole officer and the parolee, in which the parole officer had some sort of leverage to "bargain" for better behavior. It became something of a therapeutic conspiracy between some parole officers and their wards, "Well, you've been dirty once. Now if you don't give me another dirty, I won't report it to my superiors." Some parole supervisors would accept this arrangement and would tolerate occasional narcotic use as long as agents were effective in preventing rearrest or a relapse to addiction. This sort of bargaining seemed to work better than the parole officer who said, "If I find you dirty once, you're going back in. If you hang around with some of your old friends, you're going back in." That sort of rigid application of policy often resulted in parolees absconding and subsequently relapsing to high levels of addiction, dealing, and crime.

SUMMARY OF FINDINGS

Based on the data presented here and on other data, the most effective civil commitment approach for narcotic addicts is to place them on long-term parole, 5 to 10 years, so that their drug use and other behavior can be closely monitored. While an inpatient period may often be required initially, a few months should suffice to stabilize the addict; inpatient time should be protracted only if the addict needs vocational or educational training or for other reasons unrelated to their addiction.

Once released to the community, frequent and careful monitoring is required, using urine assays or other objective tests. If relapse to narcotic use, property crime, or dealing becomes apparent, only a short return to the inpatient facility, at most 30 to 90 days, is required to detoxify addicts and ready them for release again.

It is important to remember that the measure of recidivism often used by the CJS for evaluation is not a particularly useful one in assessing treatment outcomes for narcotic addicts. When dealing with something of such a chronic relapsing nature as addiction, different measures are more appropriate. The same perspective should be applied to narcotic addiction control as many mental health professionals take toward intervention with the chronically mentally ill: such intervention requires a lengthy, if not lifetime, management program. It is unrealistic to expect a cure, e.g., successfully maintained abstinence, in the majority of addicts who frequently come into contact with the CJS (Anglin and McGlothlin 1985). Instead, to evaluate interventions properly, it is important to use such measures as how much less time is spent incarcerated, how many fewer relapses occur, and how much less time after the intervention is spent using at an addicted level.

It would appear that an assessment of the CAP treatment and comparison groups for recidivism or relapse rate alone would have shown few differences between them. Nearly everyone in each group became readdicted at some point after intervention, but the treatment group had fewer such multiple instances, and when they did occur, they were of shorter duration. There were also longer nonaddicted periods of controlled use, or even abstinent periods, separating their relapses.

Such realistic expectations should structure the major goals of civil commitment. Although a small number of addicts do mature out of their addiction every year, social policy efforts must be directed toward long-term management programs using the CJS and treatment to effectively minimize the adverse individual and social consequences of addiction.

MM AND CIVIL COMMITMENT

Because long-term followup information was obtained on the addiction career, the study was able to examine the effects of MM for some who had been civilly committed. As noted earlier, the CAP program began in 1962. MM did not become generally available in California

until after 1970. Subjects were interviewed in 1974 and 1975, about 3 years of followup data were available for those among the civil addict sample who subsequently entered MM.

For analysis purposes, MM participation included any MM program that our subjects encountered, however administered in their local area. Subjects were divided into three groups depending on their narcotic use and treatment status during the 3 years before the interview. The “inactive” group included subjects who had shown minimal daily (addicted) narcotic use in the 3 years before the interview and were not in treatment. The “active” group comprised subjects who showed considerable daily narcotic use in the 3 years before the interview but had not entered treatment. The “methadone” group had entered treatment at some time during the 3-year period.

The activities of each group were traced backwards using the actual MM admission date as a reference point for the methadone group. The median admission date for the methadone group was used as the reference point for the inactive and active groups. The results for daily use of narcotics are shown in figure 4. (The reference point is indicated by an “M” on the abscissa).

Ten years before the MM admission date, just before most of the subjects entered the CAP, there was little difference among the groups. The CAP period started about years 8 and 9 before admission and continued until about year 4. Over this 5- to 6-year period, there is a dramatic separation in the level of daily narcotic use for the groups. Those designated as active reduced their daily narcotics use only minimally over the period of CAP supervision. (This period of supervision is marked by dashes along the abscissa.) As soon as supervision ended, there was a “bounce-back” effect in which actives actually exceeded their precommitment daily narcotics use. Part of this increase, however, was due to a heroin epidemic in the United States (marked by asterisks along the abscissa).

The methadone group apparently was comprised of subjects who responded reasonably well to the CAP by decreasing their addicted level of narcotic use, but who also rebounded on discharge to a level similar to that observed for the pre-CAP period. After MM entry, this group demonstrated a dramatic decrease in daily use that continued during the 3 years of followup. The inactive group, which apparently matured out of addiction over time, responded ideally to the CAP intent. These civil commitments reduced their daily narcotic

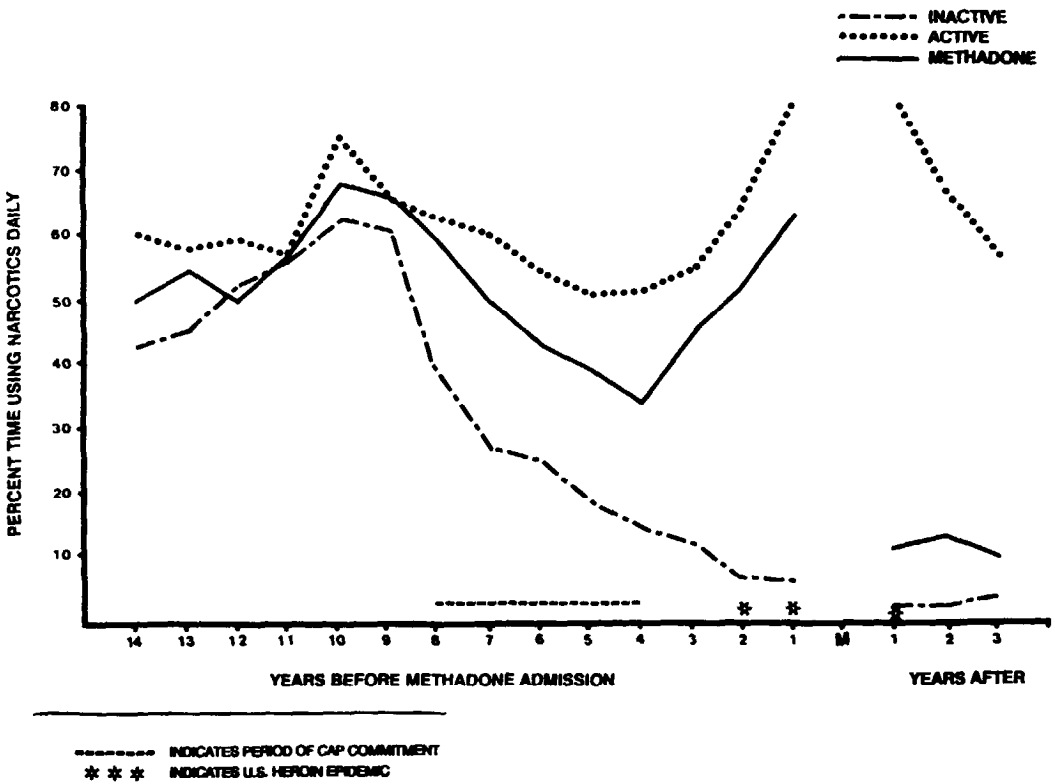

FIGURE 4. *Percent of nonincarcerated time using narcotics daily; CAP inactive, active, and methadone subsamples*

use to a considerable degree over the prescribed commitment period. By the time they were released, sufficient gains had been achieved and stabilized so that these improvements could be independently sustained in the community.

The important point these findings demonstrate for civil commitment is that, no matter what the behavioral characteristics of the group or their addiction career patterns, civil commitment produced desirable effects to some degree for all types of admissions. Apparently, the approach is a type of control that is differentially effective even on the most recalcitrant of offenders.

Figure 5 is structured in the same manner as figure 4, only the measure displayed is property crime involvement. The pattern of change over the course of the CAP and MM is very similar to that seen for daily narcotic use. For the same three groups, similar suppression occurs during the CAP, with the same rebound effects for the first two groups, after discharge, and the sustained low criminality for the inactive group. These results are further compelling evidence that civil commitment and MM are generally efficacious interventions and each has an appropriate application.

The findings presented above have occasionally been criticized on the grounds that the data about the civil commitment program are "contaminated" because some of the subjects have been on MM. That is not the case, however.

First, the data points in the time series before 1971 are uncontaminated by MM, and one sees strong effects due solely to CAP intervention (figures 1 and 2). Second, the addicts on MM were segregated into a separate group in figures 4 and 5, and the effects remain for the two groups that had never been involved with MM.

Despite the observed efficacy of the California CAP, these studies have revealed several shortcomings that limited its overall utility. Interviews with Hispanics in the program, for example, indicated that they did not like the large group therapy format that required discussion of personal thoughts, feelings, and behavior with others, particularly with individuals of other ethnic groups. Therapy for Hispanics might be more effective if they were assigned to a group of their own, or if individual counseling were employed more often. Such an approach could, however, lead to charges of racism, which might dilute the comprehensive effectiveness of the program.

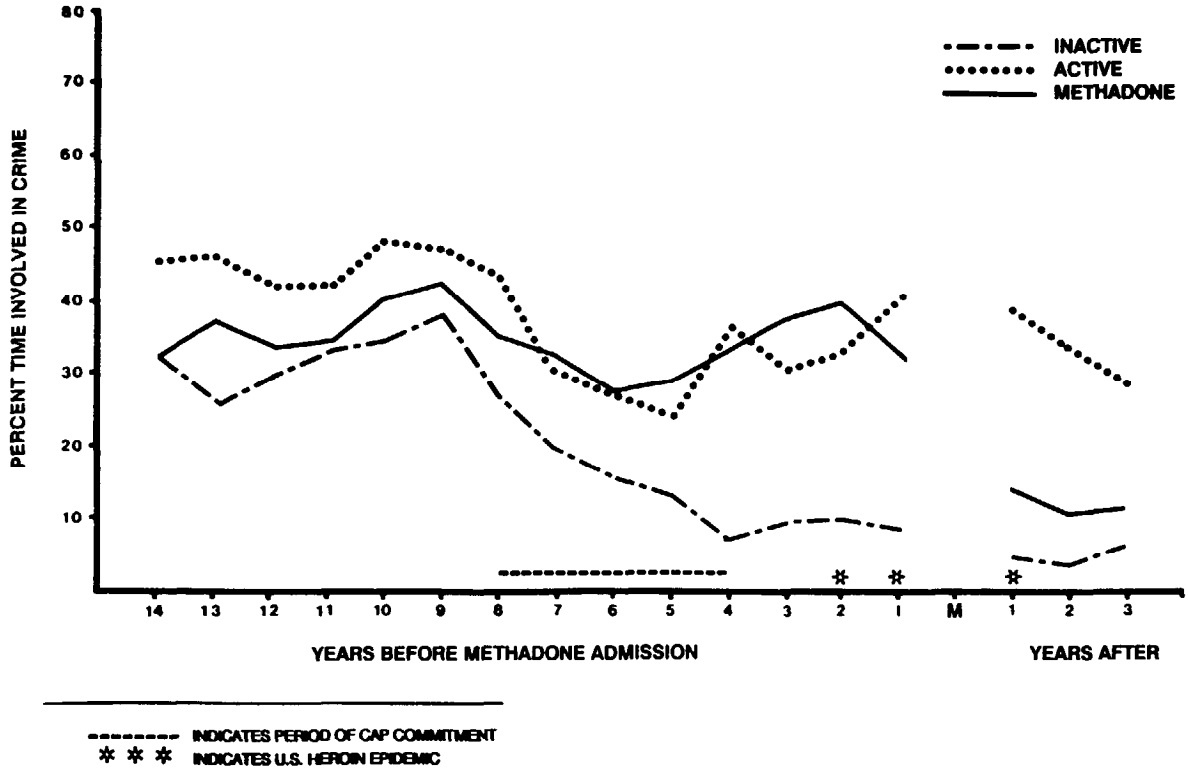

FIGURE 5. *Percent of nonincarcerated time involved in property crime: CAP inactive, active, and methadone subsamples*

Furthermore, since 1980, the length of the commitment period has been shortened from 7 years to a much shorter period that is set by the California determinant sentence law. Although there is no explicit evidence about the effect of this change, previous research and experience indicate that the success of treatment is directly related to the length of participation in the program. Therefore, shortening the total length of the treatment program has likely reduced its effectiveness. Determining the effects of this change would be an appropriate subject for future research.

OTHER CIVIL COMMITMENT EFFORTS

Three major civil commitment programs have been tried in the United States; each is discussed in this volume. The first of these was the California CAP. Because of its relative success, New York began a civil commitment program (Inciardi, this volume), and the Federal Government passed the Narcotics Addiction Rehabilitation Act (NARA) (Maddux, this volume), which also created a civil commitment program. On the whole, the laws creating the new programs were not very different from the California law. In general, the same procedures were mandated: a diversion during criminal adjudication from incarceration in jail or prison to a narcotic treatment facility or program. There was also provision for the involuntary commitment of addicted individuals who did not have any criminal charges against them. This provision, however, was used relatively infrequently in the California program, and is not used at all today, except in rare instances. Involuntary commitment without criminal charges was also infrequently used in the New York and NARA programs.

The general consensus of several authors is that the New York program was pretty much a failure. James Inciardi presents this conclusion elsewhere in this volume. Also, Titles I and III of the Federal NARA did not fare well upon evaluation (Lindblad and Besteman, in press). But Title II, administered by the Federal Bureau of Prisons, was more efficacious (Kitchener and Teitelbaum, in press).

Most researchers in the field agree that implementation strategies produced the outcome differences for the various civil commitment programs reviewed in this volume. While it is possible to develop reasonable social intervention policies that achieve good behavioral outcomes when properly applied, how the policies are implemented can ensure or sabotage success.

New York's program was not particularly successful partly because it was implemented through the State's social welfare agency, rather than through an established agency with experience in dealing with addicts and addicted behavior. The Federal NARA program had minimal results for Title I and III commitments for similar reasons. In contrast, California's and NARA's Title II programs were implemented through the CJS, specifically the California Department of Corrections and the Federal Bureau of Prisons, and both worked reasonably well, or as well as any other type of intervention has worked for the narcotic addict.

BEYOND CIVIL COMMITMENT

Many of the basic drug treatment programs now in the community did not become established nationwide until after the NARA was passed; in fact, NARA funding provided seed money for getting many community programs started. It was not until the mid-1970s that a broadly based infrastructure for community treatment was developed. In the ensuing years, a "shotgun" marriage occurred between the treatment community and the CJS, with many individuals referred to drug treatment by the courts, probation, or parole. In essence, there has developed a kind of de facto coercive structure in court, probation, and parole referrals to drug treatment that is similar to compulsory treatment efforts, albeit somewhat more haphazard and less coordinated. Because of this development, some recent research conducted at UCLA has not involved civil commitment per se, but instead has studied CJS referrals to treatment in California.

LEGAL COERCION INTO COMMUNITY TREATMENT

Subjects from two studies of MM clients were asked why they had entered MM or therapeutic community treatment programs. Two cohorts were established: a Southern California cohort of 1971 to 1973 admissions to MM and a 1976 to 1978 cross-section cohort of clients in MM treatment (Anglin and McGlothlin 1985; Anglin et al., in press). For each cohort, the total number of treatment entries for MM and therapeutic communities and the self-reported reasons for entry were determined. The results are shown in table 2.

In the admission cohort, 46 percent of those entering MM gave a legal reason that motivated their entry. These reasons could be subdivided into pressure from police, pressure from probation or parole, pressure from the courts, and indirect pressure ("The cop on

TABLE 2. *Major self-reported reasons for treatment entries for southern California programs (percent)*

Reasons	1971-1973 Admissions MM Male n=499	1971-1973 Admissions TC Male n=40	1976-1978 Cross Section MM Male n=727	1976-1978 Cross Section MM Female n=598	1976-1978 Cross Section TC Male n=64	1976-1978 Cross Section TC Female n=71
Legal	46	73	36	21	66	54
Police Pressure	1	-	1	1	-	-
P.O. Pressure	16	23	15	7	22	15
Court Pressure	6	35	2	4	38	32
Indirect Legal Pressure	9	10	15	8	5	7
General Legal Pressure	14	5	3	2	1	-
Other	54	27	64	79	34	46
Use Less Heroin	29	7	14	16	9	7
Tired of Life Style	7	15	22	28	14	14
Fear of Readdiction	1	-	1	2	-	-
External Factors	5	3	8	7	-	4
Reduce Crime	2	-	1	1	-	-
Health Problems	1	-	1	2	1	-
Family and Friends	5	-	5	4	3	13
Spouse Encouragement	N/A	N/A	6	5	1	1
Child-Related	N/A	N/A	1	8	-	-
Others	5	3	6	7	5	7

NOTE: MM=Methadone Maintenance: TC=Therapeutic Commmunity; P.O.=Probation or Parole officer.

the beat said he would bust me if I didn't get some help," or "I was so well-known in the community that it was just a matter of time..."). All of these situations represented some level of legal coercion into treatment.

Among those from the admissions cohort who entered therapeutic communities (which represent a less desirable situation for the addicts because they are, in effect, restricted to a residential facility for a period of time), 73 percent reported legal coercion as the main reason for their entry into the program. Simply put, the threshold level of coercion for motivating someone to enter treatment is higher for therapeutic communities than for MM programs.

The same pattern was observed for the cross-section sample and for both sexes. In this cohort, for MM entries, 36 percent of the men and 21 percent of the women reported legal coercion. For those entering therapeutic communities, 66 percent of the men and 54 percent of the women reported legal coercion.

Other reasons for entering treatment were more indeterminate, and some of the classifications represent our best coding of open-ended types of answers. The answers may have been as vague as a desire to use less heroin. As is clear from the table, after legal reasons, the most important reasons are either attempts to lower heroin use or they reflect "burn out" with the addict lifestyle.

EFFECTS OF LEGAL COERCION INTO TREATMENT

Because there is a common belief that people entering treatment under legal coercion do not do as well as volunteer admissions, this presumption was tested by subdividing the admissions cohort into three smaller groups: those who came in under moderate legal coercion, those who came in under high legal coercion, and those who reported no legal coercion and thus entered for "more voluntary reasons." High legal coercion was defined as having an active legal supervision, with urine monitoring at entry and/or a self-perceived legal coercion. Moderate legal supervision did not require either the testing condition or the self-perception of coercion. Approximately half of these combined categories contained individuals under supervision by the CAP.

Possible differences in performance among these groups during their first MM treatment episode were examined. Table 3 presents behavioral variables under the three levels of legal coercion. As can

TABLE 3. *During treatment behavior of MM admissions entering under no, moderate, and high legal coercion**

	No Coercion (n=84)	Moderate Coercion (n=101)	High Coercion (n=111)	F-value
#Months MI-MD	30	3 1	27	0.42
CJS Legal Supervision	5	8 3	67	331.21**
Criminal Activities				
Property Crime	15.76	18.40	16.64	0.19
Number Crimes/Month	2.59	3.71	2.69	0.58
Crime Income/Month	151.72	360.39	205.29	2.48
Dealing	25.93	23.13	26.48	0.48
Dealing Income/Week	50.93	52.13	40.37	0.11
Drug Involvement				
Daily Narcotic Use	11.36	14.96	14.20	0.01
Irregular Narcotic Use	40.91	37.42	36.76	0.16
No Use	47.71	47.61	47.02	0.01
Heavy Alcohol Use	39.27	40.61	41.08	0.04
Daily Marijuana Use	14.66	7.10	12.66	1.63

TABLE 3. (Continued)

	No Coercion (n=84)	Moderate Coercion (n=101)	High Coercion (n=111)	F-value
Social Activities				
Working	56.59	57.67	54.50	0.15
Work Income/Week	93.77	101.61	91.74	0.34
Married	40.89	42.63	35.31	0.69
Common-Law Relationship	33.61	35.92	44.46	1.59

*Unless otherwise noted, all measures represent percent of nonincarcerated time in the indicated status.

**p<.001

MI=Methadone Intake

MD=Methadone Discharge

be seen, no significant differences occur for the period after entry into treatment and treatment discharge, other than for percent of time under CJS supervision.

The difference with respect to supervision level is to be expected because it is an artifact of the way we have defined legal coercion. However, criminal activities, drug involvement, and social activities of these groups are essentially the same. These groups cannot be distinguished in terms of their behaviors.

Since these three groups cannot be differentiated other than on the level of coercion used to bring them into treatment, the findings have very important social policy implications. The results provide a powerful argument for a general social policy of using CJS coercion to bring into treatment as many people as possible by whatever legal means available. After all, until addicts are exposed to an environment where intervention can occur and are retained for a sufficient period to produce and maintain positive outcomes, change cannot be expected.

The advent of AIDS, where treatment seems to act as a buffer against the probability of infection, is an added incentive for following this policy. Based on the cumulative findings presented above, civil commitment and other forms of legal coercion, when properly implemented, work and seem to work for a majority of addicts. Such efforts should be considered for much stronger implementation, both in isolation, for addict offenders reluctant to enter community treatment programs, and in cooperation with treatment, as in the Federal TASC program (Hubbard, this volume).

CONCLUSIONS

The general conclusion from studies of the California CAP is that civil commitment and other drug treatment initiatives, particularly MM, are effective ways to reduce narcotics addiction and to minimize the adverse social effects associated with it. How an individual is exposed to treatment seems to be irrelevant. What is important is that the narcotics addict must be brought into an environment where intervention can occur over time. Civil commitment and other legally coercive measures are useful and proven strategies to get people into a treatment program when they will not enter voluntarily. The use of such measures, in a better coordinated and expanded fashion, could produce significant individual and social benefits.

While this conclusion is amply supported by research findings, given the current state of treatment availability in the United States, it is one that should not necessarily be immediately implemented until other changes have been made in the treatment delivery system. Funding for drug abuse treatment, particularly programs for narcotic addiction, has been reduced during the last decade to a point where relatively long waiting lists exist for most publicly funded programs. Unless funding is provided to create new programs or to expand existing ones, the coercion or commitment of individuals into drug treatment will only exacerbate the current situation.

Further, little or no widespread outreach efforts exist to induce drug abusers to enter treatment voluntarily. Such efforts would certainly increase the population in treatment at a lesser implementation cost.

Without these two changes, civil commitment then would be appropriate only for a limited number of addicts who are unlikely to enter treatment otherwise, and who are sufficiently problematic in their behavior to warrant commitment.

Several features characterize an effective civil commitment program. Inpatient care should be an option, and close monitoring with regular urine testing of parolees in the community is essential. Despite the need for testing, supervision of parolees should not be so strict that they abscond rather than remain in the program. Parole officers should have the flexibility to allow parolees to remain on the streets if they test positive in only a few instances, or at widely spaced intervals. As a useful adjunct for the CJS effort, MM is an extremely valuable tool for limiting narcotics use, and its availability should be expanded.

The general processes related to the cessation of narcotics use, or maturing out (Winick 1962; Anglin et al. 1966; and Brecht et al. 1987), are probabilistic and time-related ones. A small but accumulating percentage of identified addicts will stop using narcotics on an addicted basis in each year after intervention. Some parameters that differentially influence that percentage can be specified, but their effect is not very large in the short term. The chronic relapsing nature of narcotic addiction, requires a long-term monitoring effort like civil commitment, in combination with community treatment, so that the percentage ceasing addicted use in any year can be maximized, and the duration of individual addiction careers—and their cost to society—can be minimized.

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ACKNOWLEDGMENTS

Preparation of this article was supported by NIH Grant number 86-IJ-CX-0069, National Institute on Drug Abuse Grant numbers DA03425 and DA03541, and contract D-0053-5 from the California Department of Alcohol and Drug Programs.

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Clinical Experience With Civil Commitment

James F. Maddux

INTRODUCTION

Unfortunately, many compulsive users of psychoactive substances enter treatment only when under legal coercion. Even those who enter voluntarily often do so under some form of social or pharmacological coercion, such as pressure from family or friends, perceived imminent arrest, loss of regular drug seller, or inability to pay the cost of an increasing daily dosage. With or without external coercion, nearly all seem to have an ambivalent attitude toward their substance dependence. They want to free themselves of the burden and consequences of substance dependence, but they also want the effects of the substance. In an individual at different times, one desire or the other becomes dominant. Among contemporary opioid users, two other personality attributes often adversely affect engagement in treatment. The first, variously labeled psychopathy, psychopathic deviance, sociopathy, antisocial behavior, or antisocial attitude, has often been reported as a noteworthy personality feature of opioid users. The other, variously labeled impulsivity, low frustration tolerance, or inability to delay gratification, has also been frequently reported among opioid users (Maddux et al. 1986). An ambivalent attitude toward the drug dependence, together with an antisocial attitude and a low tolerance for distress, create a conflicted and unstable motivation for treatment. This unstable motivation has represented a major problem in the treatment of opioid dependence.

In this chapter, clinical experience with opioid addicts in treatment voluntarily under varied criminal law coercions and under civil commitment is reviewed. Experience at the two former Public Health Service (PHS) hospitals at Lexington, KY, and Fort Worth, TX, is

described. The effect of varied treatment and correctional interactions on long-term outcomes is estimated.

PREMATURE DEPARTURE OF VOLUNTARY PATIENTS

In 1936, the first annual report of the PHS hospital at Lexington stated that treatment of voluntary patients had not been very effective because most of them left before treatment was completed. Although the Lexington PHS hospital and its sister hospital (opened in 1938 at Fort Worth) were established primarily to care for narcotics addicts convicted of Federal law violations, the two hospitals were also authorized to admit and treat voluntary patients. Most admissions to both hospitals were voluntary from 1935 until 1968, when admission of voluntary patients ceased. Approximately 70 percent of the voluntary patients signed out against medical advice before completing treatment (Rasor and Maddux 1966). Most of those who remained to complete treatment had the legal pressure of probation from a State court (Levine and Monroe 1964).

The hospital programs were designed to treat not only withdrawal illness but also the drug-using habit and associated mental and social problemS as well. The treatment programs included four fairly distinct elements: drug withdrawal, residence in a drug-free environment, psychotherapy, and supervised activities (Kolb 1939; Kolb and Himmelsbach 1938; Kolb and Ossenfort 1938). The recommended duration of hospital treatment was 6 months, but this was later reduced to 4 months. The supervised activities came to include work, vocational training, remedial education, and recreational activities. Medical care, dental care, social work service, and religious services were provided.

Nearly all of the professional staff viewed drug withdrawal as a preliminary or minor aspect of treatment, with the important therapeutic work to come later. Consequently, the departure of most voluntary patients during or shortly after withdrawal became a source of continuing frustration for the staff. Usually the voluntary patients signed out silently, but some gave reasons for leaving, such as: I came only to reduce my habit; I'm not getting enough methadone; I want to go to work; I need to take care of family problems (Maddux et al. 1971). Whatever the reasons, most voluntary patients would not or could not stay to complete the treatment program.

In 1946, the "Blue Grass" admission was initiated at the Lexington hospital to reduce premature departures (Kay 1974). The Commonwealth of Kentucky made habitual narcotics use a misdemeanor, with punishment of up to 1 year in jail. Patients who left against advice were readmitted only if they pleaded guilty to narcotic use in a Kentucky court. The consequent sentence was then suspended on condition that the person stay at the Lexington hospital until treatment was completed. If the patient attempted to leave prematurely, the local sheriff was notified. The Blue Grass procedure came into disfavor because patients were required to obtain a criminal conviction as a condition of admission to the hospital, and was discontinued about 1956. During the 1950s hospital staff members recommended enactment of a Federal civil commitment law for narcotic addicts, but legal counsel in the Department of Health, Education, and Welfare considered such a law unconstitutional.

EARLY FOLLOWUP STUDIES

Several followup studies from 1943 into the 1960s indicated that addicts treated under legal coercion had better outcomes than others. Pescor's (1943) followup study suggested that paroled prisoners and probationers had better outcomes than voluntary patients (table 1).

However, prisoners without compulsory posthospital supervision did no better than the voluntary patients. The Hunt and Odoroff study (1962) showed that nonvoluntary patients did better than voluntary

TABLE 1. *Percentage of opioid addicts continuously abstinent for 6 months or longer after discharge from Lexington PHS hospital, by hospital status*

Hospital Status	Percentage Abstinent
Voluntary (n=1206)	13
Probation (n=491)	27
Paroled Prisoner (n=110)	31
Other Prisoner (n=2895)	10

SOURCE: Pescor 1943.

TABLE 2. *Percentage of opioid addicts found continuously abstinent 1 to 4 1/2 years after discharge from Lexington PHS hospital, by hospital status*

Hospital Status	Percentage Abstinent
Voluntary (n=1503)	6
Nonvoluntary (n=378)	11

SOURCE: Hunt and Odoroff 1962.

patients (table 2). Duvall et al. (1963) reported, however, that voluntary black males had better outcomes than black male prisoners (table 3). All of these studies had methodological problems, and, in the case of the Duvall study, the small number of prisoners creates a problem in interpretation. An increase of one abstinent prisoner would increase the percentage abstinent from 4 to 8 percent.

Vaillant's (1966a; Vaillant 1966b) 12-year followup study tended to confirm Pescor's finding of two decades earlier with respect to the importance of postinstitution parole. Table 4 shows that only 4 percent of voluntary hospitalizations, but 67 percent of prison/parole combinations were followed by postinstitution abstinence for 1 year. These data also present a problem in interpretation because only 100 subjects were followed, and what is included in the table are episodes of institutionalization of subjects over a 12-year period. The episodes are not mutually independent.

TABLE 3. *Percentage of black male addicts abstinent 6 months after discharge from Lexington PHS hospital, by hospital status*

Hospital Status	Percentage Abstinent
Voluntary (n=38)	11
Prisoner (n=24)	4

SOURCE: Duvall et al. 1963.

TABLE 4. *Percentage of institutionalizations followed by 1 year of abstinence during 12-year followup*

Type of Institutionalization	Percentage Abstinent
Voluntary Hospitalization (n=270)	4
Prison<9 Months (n=279)	4
Prison>8 Months With No Significant Parole (n=46)	13
Prison>8 Months With Parole>1 Year (n=30)	67

SOURCE: Vaillant 1966b.

As I have noted, some "voluntary" patients were admitted to both the Lexington and Fort Worth PHS hospitals under legal pressure of probation from a State court. A followup study in the 1960s at the Fort Worth PHS hospital showed that voluntary patients with legal pressure had better outcomes than those with no legal pressure (table 5) (Maddux et al. 1971). Patients with legal pressure not only had hospitalization with legal pressure, but they also had compulsory posthospital supervision.

TABLE 5. *Percentage of opioid addicts abstinent during 1 year after discharge from Fort Worth PHS hospital, by hospital* status

Hospital Status	Percentage Abstinent
Voluntary With Legal Pressure (n=61)	20
Voluntary With No Legal Pressure (n=120)	7

SOURCE: Maddux et al. 1971.

While these studies generally found better outcomes of treatment with legal coercion, the outcomes were not markedly better than those after treatment with no legal coercion. With the exception of the Vaillant (1966b) followup study, the studies found that only 4 to 31 percent of patients treated under legal coercion remained abstinent for 6 months or longer after release from the institution. Even after treatment with legal coercion, most patients resumed opioid use.

FEDERAL CIVIL COMMITMENT LAW

At the White House Conference on Narcotic and Drug Abuse, convened by President Kennedy in 1962, one of the major topics was treatment under civil commitment (White House Conference on Narcotic and Drug Abuse 1963). Nearly all the speakers approved civil commitment or some form of compulsory treatment, although little clinical experience with civil commitment was described. At that time, most States had laws that permitted civil commitment of narcotic addicts, but those laws had been infrequently used (Harney 1962). California, in 1961, and New York, in 1962, enacted legislation that provided for the development of large rehabilitation programs based on civil commitment. Civil commitment was advocated as having two main purposes: protection of society and rehabilitation of the individual. Some cautionary comments were made about the possibility of "commitment" becoming another name for incarceration. Following the White House Conference, the President's Advisory Commission on Narcotic and Drug Abuse recommended that a civil commitment statute be enacted to provide an alternative method of handling the federally convicted offender who was a confirmed narcotic or marijuana abuser (President's Advisory Commission on Narcotic and Drug Abuse 1963).

When Congress enacted the Narcotic Addict Rehabilitation Act (NARA) (Public Law 69-793) in 1966, the statute provided not only for civil commitment of convicted offenders as recommended by the Advisory Commission but also of persons charged, but not convicted, and of persons not charged with any offense. The act consisted of four titles.

Title 1 authorized civil commitment for treatment of eligible addicts charged with a Federal offense who chose to be committed instead of prosecuted. After examination, addicts considered suitable for rehabilitation could be committed to the Surgeon General for 36 months of institutional treatment and supervised aftercare.

Title II authorized civil commitment of eligible addicts convicted of a Federal offense. After examination, addicts considered suitable could be committed to the Attorney General for a period not to exceed 10 years of institutional treatment and aftercare.

Title III authorized civil commitment of addicts not charged with any criminal offense. Any addict or individual related to an addict could petition the U.S. Attorney in the district in which he or she resided for commitment to treatment. As under Title I and Title II, examination was required prior to commitment to determine if the person was an addict who was likely to be rehabilitated. Addicts considered suitable could then be committed to treatment in a hospital for a period not to exceed 6 months. Following hospital treatment, the court could place the person under the custody of the Surgeon General for posthospital treatment for 36 months. During this period the person could be recommitted for another 6 months of hospital care.

Title IV authorized financial assistance to States and localities for treatment programs for narcotic addicts. Grants to States and communities for drug abuse were later administered under amendments to the Community Mental Health Centers Act until 1980, when drug abuse, alcoholism, and mental health grants were consolidated into a block grant. In 1986, the Anti-Drug Act (Public Law 99-570) provided for additional funds in the block grant for treatment and prevention of drug abuse.

NARA PROGRAM

The NARA authorized the Surgeon General to enter into contracts with any public or private agency to provide examination or treatment of committed addicts; but, in order to develop the NARA program quickly, it was decided to use the Lexington and Fort Worth PHS hospitals for examination and institutional treatment. In 1967, the PHS renamed the two hospitals "clinical research centers." However, under the NARA, their clinical missions continued, and they are referred to as "hospitals" throughout this chapter.

Admission of NARA patients to the Lexington and Fort Worth hospitals began in 1967. Admission of Federal prisoners ceased in 1967, and admission of voluntary patients ceased in 1988. From 1967 through 1973, 10,153 NARA patients were admitted to the two hospitals. Five percent were admitted under Title I, 2 percent under Title II, and 93 percent under Title III. In 1968, admission of Title II

patients ceased because the Bureau of Prisons had developed rehabilitation programs for addicts and began to accept Title II patients.

Patients who entered hospitals with NARA commitment did not seem to differ noticeably from those previously admitted with voluntary or prisoner status. In 1962, 84 percent of admissions to the two centers were men; from 1967 through 1973, 85 percent of the NARA admissions were men. In 1962, admissions had the following ethnic distribution: white, 48 percent; black, 36 percent; and Hispanic, 16 percent (Maddux 1965). During the years 1970 through 1973, 5,931 NARA admissions had the following ethnic distribution: white, 43 percent; black, 47 percent; and Hispanic, 10 percent. Clinically, the NARA patients seemed to resemble their predecessors: most were undereducated, most had erratic work histories, and all had become handicapped by their drug dependence. Antisocial attitudes and low tolerance for distress seemed prominent.

ATTRITION OF NARA PATIENTS

To the dismay of court officials, many of the NARA patients sent to hospitals for examination were found not suitable for treatment. Through 1968, the Fort Worth hospital found 38 percent of the NARA admissions not suitable for treatment. Through 1971 the Lexington hospital found 51 percent not suitable for admission. The patients coming to the two hospitals may have differed in suitability, or the professional staffs may have differed in their judgments of suitability. Nearly all the “not suitable” patients were found to be narcotic addicts, but they were considered too antagonistic, disruptive, or dangerous to participate in the institution treatment program. Many entered the NARA program under Title III as a condition of probation after conviction in a State court. Having entered the NARA program, patients had in many instances complied with the State court requirement, and some acted to get themselves labeled unsuitable: they refused to get out of bed; would not come to interviews; remained silent in group therapy; refused to shower; and some threatened violence against staff members or other patients. The professional staff worked hard to draw these patients into therapeutic interaction before they reported them as not suitable (Maddux 1978).

Some NARA patients expressed contradictory attitudes to court officials and hospital staff. For example, a heroin user would apply for commitment and tell the judge that he wanted treatment in the NARA program; the judge would send him for examination to one of the hospitals. There he would insist that he did not want treatment

and intended to resume heroin use as soon as possible; for approximately 3 weeks he would refuse to take part in the treatment program; when returned to the court as "not suitable," he would tell the judge that he did not understand why the hospital rejected him, for he wanted treatment in the NARA program.

Thus, many NARA patients, who previously would have entered the hospitals voluntarily and then signed out against advice, now entered the examination phase of the NARA program but avoided commitment by adverse conduct. Furthermore, some patients committed for 6 months of institutional care under Title III became so antagonistic during hospitalization that they were discharged and the court commitment terminated. Mandell and Amsell (1973) found that only 35 percent of 7,353 NARA patients admitted for examination were discharged to aftercare. The attrition continued after discharge to aftercare. Langenauer and Bowden (1971) reported that only 38 percent of 252 NARA patients released remained in aftercare 6 months after discharge. Patients were lost from aftercare by recommitment for institutional care, conviction, incarceration, death, and disappearance.

The NARA provided penalties for escape from institutional commitment under Title III, but no one was prosecuted. Some judges questioned the constitutionality of the law. Only a small number of patients committed under Title III escaped from institutional custody. Patients did not have to escape to get out: they could obtain their release by adverse behavior.

Release from the hospitals for adverse behavior was not new under the NARA. The two hospitals had always discharged patients considered disruptive or dangerous in the hospital environment. Disruptive prisoner patients were transferred to prisons, and disruptive voluntary patients were discharged involuntarily. From 1938 through 1969, approximately 30 percent of prisoner addicts admitted to the Fort Worth hospital were subsequently transferred to prisons (Maddux, unpublished). These patients seemed to have intense chronic anger, manifested by episodic outbursts of fury, or by persisting antagonistic behavior. They probably used heroin as attempted self-medication for their anger.

DEVELOPMENT OF HOSPITAL PROGRAMS

Although the NARA program required new and different procedures, the fundamental treatment programs of hospitals did not change very

much in direct response to the NARA. Evaluation reports had to be prepared and sent to courts, patients had to be transported between courts and the hospitals, and reports had to be sent to community agencies providing posthospital service.

During the 1950s and 1960s, treatment programs changed in response to changes in the theory and practice of American psychiatry. The main changes consisted of (1) the advent of a psychoanalytic orientation in diagnosis and psychotherapy: (2) introduction of group therapy; and (3) development of sociotherapy (Lowry 1956; Lewis and Osberg 1958; Maddux 1965).

While individual psychotherapy became psychoanalytically oriented, only a small number of patients entered psychotherapy. Few staff members were available, and few patients seemed ready to explore their personal problems in individual psychotherapy sessions. Group therapy seemed more suitable for most patients, and by the end of the 1960s most patients were in some form of group therapy or group counseling.

The recognition that the social milieu of the mental patient could be either therapeutic or noxious became widespread in the United States after World War II. The hospitals attempted to create a therapeutic milieu. This effort was influenced initially by the therapeutic community developed in England by Jones (1953) and later by the Synanon treatment program (Yablonsky and Dederich 1965).

At the Fort Worth hospital during the years 1964 to 1966, Hughes et al. (1970) attempted to develop a rehabilitation-oriented community of addict patients by implementing intensive group work and by enlisting patient collaboration in the treatment program. This unit was based partly on the Synanon model. During the late 1960s, the Lexington program was reorganized into five relatively autonomous treatment units, each based on the therapeutic community concept and each having about 100 patients (Conrad 1977). All units emphasized daily therapeutic interaction among staff and patients using confrontation as a major technique, with emphasis on current behavior. Emotional disorders also received attention, especially the depression that often emerged as a person became engaged in treatment.

One of the units, directed by ex-addicts, resembled Synanon more than the other units. This unit was in operation for 2 years. Toward the end of the second year the ex-addict leaders regrettably began to behave in an irresponsible manner, which required

termination of the unit. Partially self-governing units had existed at the Lexington and Fort Worth hospitals in the years preceding NARA. Most of these units eventually became corrupted by antisocial behavior, with consequent disillusion and anger among staff. Synanon itself degenerated in the 1970s (Deitch and Zweben 1981).

Grants to States and communities under Title IV of the NARA and under other legislative authority led to closure of the Fort Worth and Lexington hospitals in the early 1970s. The increasing local services for drug abuse treatment led to decreasing Title III commitments. Addicts could be committed legally under Title III only if appropriate State or other facilities were not available. Consequently, the hospitals lost their clinical mission, and their research mission was terminated.

NARA FOLLOWUP STUDIES

Two followup studies of NARA patients were completed. Langenauer and Bowden (1971) reported that 86 percent of 97 patients remaining in aftercare in the sixth month had used an opioid drug at some time during the 6 months. Stephens and Cottrell (1972) reported that 87 percent of 200 NARA patients used an opioid drug at some time during the first 6 months after release from the hospital, but only 65 percent became readdicted. The two studies found that 13 to 14 percent remained abstinent for 6 months. Thus, with respect to duration of abstinence, the NARA program seemed to lead to somewhat better results than did voluntary hospitalization. Moreover, some of the previous studies may have overestimated abstinence. In the NARA posthospital service, counselors observed subjects repeatedly during the followup period, and regular urine testing was done. In our study of the addiction careers of 246 opioid users, we found that repeated observation tended to reveal more opioid use (Desmond and Maddux 1977; Maddux and Desmond 1981).

Followup studies of voluntary, prisoner, and civil commitment patients from the PHS hospitals gave an unduly pessimistic picture of treatment outcomes. They emphasized a severe outcome measure of success, namely, continuous abstinence during 6-month to 4 1/2-year periods after discharge. Both the Drug Abuse Reporting Program (DARP) and the Treatment Outcome Prospective Study (TOPS) used a more advanced design to estimate treatment effectiveness, namely, before and after measures (Simpson and Sells 1982; Hubbard et al. 1984). Since nearly all opioid users are using daily before entering treatment, a before and after comparison will nearly always show

improvement after treatment. The early followups concentrated on opioid use, while the DARP and the TOPS followups measured not only opiold use but also other substance use and other behaviors.

LEGAL COERCION AND LONG-TERM OUTCOMES

While short-term outcomes seem better with legal coercion during and after institutional treatment, hardly any research exists on the effects of coercion on long-term outcomes. Zahn and Ball (1972) found that length of hospital stay was associated with 3-year cure among Puerto Rican addicts who had been treated at the Lexington hospital. Since those with a longer stay were predominately prisoners, the findings point to a better outcome after nonvoluntary treatment. However, the subjects had a mean age of only 33 at the time of the followup interview.

In his 20-year followup of Lexington patients, Vaillant (1973) reported that addicts who achieved stable abstinence of 3 years or longer received more imprisonments with parole than did subjects who died. His group would have had a mean age of 45 at the time of followup, if all were alive. O'Donnell (1969) did not analyze the possible different outcomes from voluntary and nonvoluntary hospitalization in his long-term followup of Kentucky addicts. In their 12-year followup study, Simpson et al. (1986) found that treatment patterns over time were too varied and confounded with other influences to permit comparisons for long-term outcomes. However, 57 percent of the subjects abstinent in the 12th year reported that fear of being jailed was a reason for quitting addiction.

In 1984, 18 years after our study of addiction careers began, 22 (9 percent) of the subjects were found in stable abstinence, that is, for 3 years or longer they had abstained from opioid drugs, they had not been alcoholic, they had worked regularly, and they had no felony arrests (Maddux and Desmond 1981). The treatment and correctional experience of this group varied widely. One subject had one voluntary hospitalization lasting 11 days and then entered stable abstinence, which endured for 20 years (through 1984). Residence relocation away from San Antonio and intense religious activity probably facilitated his abstinence. Another subject voluntarily entered methadone maintenance while he was on probation for 10 years after a criminal conviction. Treatment was not required as a condition of probation. During 8 years on methadone, he repeatedly expressed fear of prison. He had never been in prison, but he had spent 2 months in jail. He withdrew from methadone and entered

stable abstinence, which continued for 7 years (through 1986). His enduring fear of prison probably facilitated his abstinence. Another subject had seven treatment and correctional interactions before entering stable abstinence. The last two immediately preceded his abstinence. He was convicted of a drug law violation and placed on probation, with the requirement that he apply for treatment under the NARA. While in residential treatment under a Title III commitment, he seemed to undergo marked changes in attitude. On completion of treatment, he was employed as a drug abuse counselor. His stable abstinence continued for 12 years (through 1984). His employment as a drug abuse counselor probably facilitated his abstinence.

These three vignettes illustrate the variations in treatment modes, in numbers of treatment and correctional interactions, and in legal coercions, which can lead to stable abstinence. Although the treatment and correctional interactions varied, 20 (92 percent) of the 22 subjects in stable abstinence had one or more treatment or correctional interactions during the year preceding the onset of stable abstinence. Thus, a treatment or correctional interaction may have sewed as a critical experience that enabled the person to begin stable abstinence. The vignettes also suggest the importance for continued stable abstinence of the motivational state and of post-treatment activities such as residence relocation, religious activity, and employment in a drug abuse treatment agency.

The long-term pattern of treatment admissions and correctional interactions of the 22 subjects in stable abstinence was compared with that of 22 subjects who did not achieve stable abstinence by 1964. Each subject in stable abstinence was matched with a subject not in stable abstinence, by age and calendar year of first opioid use. Then, for each member of each pair, the number of voluntary treatment admissions, nonvoluntary treatment admissions, and correctional interactions was counted for the same period of time, namely, the years from first use to onset of stable abstinence in the member in stable abstinence of each pair. The mean age of first opioid use of the subjects in stable abstinence was 18; as a consequence of selection, the mean age of first opioid use was the same for the comparison group. The mean number of years from first use to onset of stable abstinence in the stably abstinent group was 18. Table 6 shows a similar pattern of treatment admissions and correctional interactions in both groups. None of the small differences between groups were statistically significant. Nonvoluntary treatment did not appear associated with achievement of stable abstinence.

TABLE 6. *Treatment admissions and correctional interactions during mean period of 18 years of subjects in stable abstinence and those not in stable abstinence*

	Stable abstinence (n=22)	Not in Stable abstinence (n=22)
Mean Voluntary Treatment Admissions	3.3	3.7
Mean Nonvoluntary Treatment Admissions[a]	2.4	2.1
Mean Correctional Interactions[b]	3.1	4.0

[a]Nonvoluntary Treatment Admission=treatment while on probation or parole, awaiting prosecution, in prisoner status, or under civil commitment.

[b]Correctional Interaction=probation, prison, or jail 1 week or longer.

ILLICIT OPIOID USERS NOT IN TREATMENT

At a conference in 1969, a colleague assured this author that the problem of heroin addiction in the United States would disappear within 2 years, because all the heroin addicts would be maintained on methadone. Since that time, many studies have demonstrated that while patients remain in methadone maintenance treatment their heroin use and criminal behavior diminish and their legitimate employment increases (Cooper et al. 1983). A review of 113 studies indicated that approximately 15 to 35 percent of methadone patients dropped out during the first year of treatment (McLellan 1983). The dropout rate for methadone maintenance seems much lower than that for drug-free treatment in either voluntary status or Title III commitment.

Since our study of addiction careers began before and continued after methadone maintenance became available to large numbers of opioid users in San Antonio in 1970, we can estimate how methadone maintenance affected the study group. During the 16-year period

from 1970 through 1986, 62 percent of the subjects alive in 1970 entered methadone maintenance; due to dropouts, much smaller percentages were found on methadone in any specified year. In 1984, only 12 percent were maintained on methadone during most of the year (table 7). However, if we exclude deceased subjects and those in prison or jail, thereby restricting the denominator to the 155 subjects alive and in the community, then 19 percent were maintained on methadone. Only 10 percent were known to be using heroin. If, as before, we restrict the denominator to those alive and in the community, then 16 percent were using heroin. Some of the subjects

TABLE 7. *Status of 248 San Antonio opioid users in 1984*

Status	Number	Percent
Using Heroin Daily	16	6
Using Heroin Occasionally	9	4
Deceased	53	21
Jail or Prison	40	16
Maintained on Methadone		
Social Recovery[a]	7	3
Partial Social Recovery	22	9
Abstinent From Opioids		
Stable[b]	22	9
Not Stable	29	12
Alcoholic	16	6
Other		
Partial Information Indicating Abstinence	4	2
Partial Information Indicating Substance Abuse or Other Related Problems	10	4
Unknown	21	8
TOTAL	248	100

[a]Social recovery=3 or more years continuous maintenance, not alcoholic, regular work, negative urines, and no felony arrest.

[b]Stable=3 or more years continuous abstinence, not alcoholic, regular work, and no felony arrest.

with unknown status were probably using heroin. If all the unknowns were using heroin, the total using heroin would be 19 percent, or 30 percent of those alive and in the community.

Although the problem of heroin addiction did not disappear, methadone maintenance has undoubtedly reduced the pool of illicit opioid users in the community. Nonetheless, a noteworthy segment of our study subjects, between 16 and 30 percent of those alive and in the community, were using an illicit opioid drug in 1964. All of our subjects were men, and 87 percent had a Mexican-American background. In these respects, they differed from the U.S. population of illicit opioid users, but we have no reason to believe that they differed in severity of opioid dependence. Our data suggest that many chronic opioid users are not in treatment and are not incarcerated.

CIVIL COMMITMENT IN AN ARRAY OF COERCIONS

The unstable motivation for treatment described at the beginning of this chapter varies among individuals and, with time, in a given individual. Some opioid users enter and stay in treatment with a minimum of external coercion, such as pressure from family members. Some enter and stay in treatment in response to the threat of loss of a job or loss of a license to practice a profession. Some stay in treatment after civil commitment with no criminal coercion. Some stay in treatment after criminal conviction and probation, as an alternative preferred over prison; some stay in treatment only after criminal conviction and sentencing to an institution having a treatment program.

Within this array of pressures and coercions, civil commitment, without criminal law coercion, can probably bring some opioid users into treatment who would not enter voluntarily and who have not incurred any criminal law coercion. Thereby, it would reduce somewhat the pool of opioid users in the community who are not in treatment. The experience of the PHS hospitals suggests that civil commitment, without any Federal criminal law coercion (the Title III commitment), will hold only about one-third of the admissions through 8 months of institutional care. Some of these, as noted, were under coercion of probation from a State court. None of the Title III patients were prosecuted for escape from institutional treatment. In general, law enforcement agencies do not seem to pursue persons who escape from civil commitment, whether for

substance abuse or other forms of mental illness, as vigorously as they pursue persons who escape from criminal custody.

For persons with criminal convictions, civil commitment in lieu of sentencing seems to have no special advantage if the correctional system has treatment programs, or if community programs are available and can be utilized. The criminal conviction itself provides strong coercion.

LIMITATIONS OF CIVIL COMMITMENT

Civil commitment has three serious limitations. First, civil commitment cannot overcome deficits in services. Few States with civil commitment laws for drug users appear to have treatment programs for committed persons. Furthermore, in 1987, insufficient treatment services, especially methadone maintenance, existed in the United States for opioid users who voluntarily applied for treatment.

Second, coercion can bring a person into treatment, but it cannot make him or her participate in the treatment. Until the 1950s, a prisoner patient could serve his time quietly at one of the PHS hospitals, without psychotherapy or counseling, and with minimum or no participation in vocational training or remedial education. The staff knew of these passive patients, but hoped that residence in a drug-free environment would help to extinguish the drug-using habit. After 1950, with the advent of group therapy and the therapeutic community concept, it became increasingly difficult for patients to remain aloof from psychosocial interaction with staff and other patients. Even into the 1970s, however, some patients passively participated in group therapy or other activities. Patients called this "going along with the program." Some Title III patients probably left the program because of the discomfort created by confrontations from staff and other patients. Most modem institutional treatment programs are based on some form of the therapeutic community. They cannot treat all the opioid users. Secure custodial care only is required for some.

Third, civil commitment operates within constitutional guarantees of individual liberty. This is a controversial area. Under what circumstances and to what extent should society curtail the liberty of a compulsive drug user? Szasz (1972), a psychiatrist, developed the argument that in a free society all drugs should be legalized. He proposed that it should be none of the government's business what drug a man puts into his body. Newman (London 1972; Newman

1974), director of the New York City methadone maintenance program, vigorously opposed civil commitment. He was concerned about curtailment of civil liberty but also about insufficient voluntary treatment services, especially methadone maintenance.

The problem becomes further complicated because nonvoluntary treatment, whether civil or criminal commitment, usually has dual goals: first, to help the individuai; and second, to protect the community. Civil commitment of the mentally ill has always served these two purposes. During the 1970s, the criteria for civil commitment of mentally ill persons changed from mentally ill and in need of treatment to mentally ill and dangerous to self or others (Stromberg 1982). This emphasis on dangerousness has allegedly increased the number of homeless, mentally ill persons wandering the streets. Statutes related to civil commitment of substance abusers have probably followed the trend toward a criterion of dangerous to self or others. A study is needed of current State statutes for civil commitment of substance abusers, and the extent to which they are used.

SUMMARY

The unstable motivation of the addicted person has represented a major problem in the treatment of opioid dependence. Only a minority of voluntary patients remained in the two PHS hospitals for treatment beyond withdrawal. Early followup studies at the two hospitals indicated that treatment under legal coercion, especially when combined with compulsory posthospital care, had better outcomes, but not markedly better, than did voluntary treatment.

A large proportion, one-third to one-half, of the patients admitted to the hospitals for examination prior to civil commitment were found not suitable for treatment, mainly due to their disruptive or dangerous behavior. Due to attrition after examination and during 6 months of hospital treatment under commitment, only about one-third of the civil commitment patients admitted were discharged to aftercare. The high attrition rate may have been partly due to intensive psychosocial treatment. Patients who absconded from treatment were not prosecuted; consequently, civil commitment provided only a weak coercion to treatment. Two followup studies suggested that the short-term outcomes of the civil commitment patients were somewhat better than those of voluntary patients.

Limited and inconclusive research exists on the relation of coercion to long-term stable abstinence.

Methadone maintenance is accompanied by improved social adjustment, but it retains in treatment only a minority of opioid drug users. One study suggests that 16 to 30 percent of the population of chronic opioid users in the community is not in treatment.

Civil commitment, as one of an array of social and legal coercions, can probably bring some opioid users into treatment who would not voluntarily enter. It has several limitations. Civil commitment cannot overcome deficits in treatment services. Civil commitment, or any other kind of external coercion, can bring drug users into treatment but cannot assure that patients will participate in treatment. Finally, civil commitment is restricted by constitutional guarantees of individual liberty.

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ACKNOWLEDGMENT

This work was supported, in part, by the Public Health Service Grant number DA 00083 from the National Institute on Drug Abuse.
D.P. Desmond, MSW, helped with the collection and the analysis of data.

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The Criminal Justice Client in Drug Abuse Treatment

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INTRODUCTION

The assumed relationships between drug use and crime (Ball et al. 1981; Gandossy et al. 1980; Panel on Drug Use and Criminal Behavior 1976), the finding that successful drug abuse treatment reduces crime (Simpson et al. 1978; McGlothlin et al. 1977; Nash 1976), and criticisms of traditional criminal justice approaches to dealing with drug-abusing offenders (Lipton et al. 1975; Carter and Klein 1976) led to the development of programs to refer drug abusers in the criminal justice system to treatment. Clients referred from the criminal justice system have been shown to stay in treatment longer than other clients (Collins et al., in press). Their longer retention leads to an expectation that these criminal justice system clients will have better treatment outcomes than other clients. The literature has not provided consistent results to support this expectation.

Legal involvement alone may motivate some drug abusers to seek treatment as a way to reduce sentences. There are various formal and informal mechanisms to identify and refer drug abusers in the criminal justice system to treatment. The major model is the Treatment Alternatives to Street Crime (TASC) program. TASC programs have been developed with Federal funds under local administration and were intended to become institutionalized under State or local auspices at the expiration of their Federal grants. The goals of the TASC programs have been to identify drug abusers who come into contact with the criminal justice system, to refer those who are eligible to appropriate treatment, to monitor clients' progress, and to return violators to the criminal justice system. Through TASC and other types of formal or informal referral mechanisms, linkages between the criminal justice system and the drug treatment system

have been developed in many cities to assist criminally involved drug abusers to obtain treatment.

This chapter summarizes the findings from the Treatment Outcome Prospective Study (TOPS) to examine the question of whether or not referral to drug abuse treatment through the criminal justice system benefits the client and society. Because of the crime reduction impact of drug abuse treatment (Harwood et al., this volume), treatment of drug abusers in the criminal justice system is thought to have more positive cost benefits for society than treatment of clients with no legal involvement.

Formal referral programs such as TASC may increase the number of drug abusers in the criminal justice system who are treated. Drug abusers in the criminal justice system are thought to be more unlikely than other drug abusers to seek treatment of their own accord. Nonvolunteer clients, however, may be more difficult to treat than clients who seek treatment on their own. Empirical evidence is needed to determine if, and how, criminal justice system referral contributes to treatment outcomes of clients compared to self-referral and other sources of referral.

Clients who entered treatment through TASC or who were otherwise involved in the criminal justice system are the principal focus of the analyses presented in this chapter. Four important questions need to be considered to assess the effectiveness of TASC programs and other types of criminal justice system involvement compared with clients with no legal involvement.

- How do clients involved with the criminal justice system differ from other clients entering treatment in terms of drug abuse treatment history and treatment needs?

- How successful are programs in retaining clients involved with the criminal justice system?

- Do TASC and non-TASC criminal justice system clients differ from other clients in services received and satisfaction with treatment?

- Do drug use and criminal behavior of clients involved with the criminal justice system decrease during and after treatment?

METHODOLOGY

TOPS is a large-scale prospective study of clients in 10 cities who entered 41 publicly funded outpatient methadone, residential, and outpatient drug-free drug abuse treatment programs from 1979 to 1981. TOPS established baseline data on drug use, criminal behavior, and other behavior in the year before treatment; gathered data on events during treatment; and reinterviewed samples of clients at 3 months or 1, 2, or 3 to 5 years after they left treatment. A major purpose of TOPS is to determine the key factors that affect treatment outcomes, including involvement with the criminal justice system.

As described in previous monographs, the characteristics and behaviors of clients entering each modality differed greatly (Hubbard et al. 1986). as did the nature of treatment received in each modality (Allison et al. 1985). Table 1 illustrates major differences among the modalities in the proportion of clients involved with the criminal justice system. About one-third of the clients in residential and outpatient drug-free programs were referred to treatment through the criminal justice system. Less than 3 percent of the methadone clients were referred by the criminal justice system. Because relatively few methadone clients were referred to treatment through the criminal justice system, and only about one in six reported any involvement with the criminal justice system at admission, the subsequent analyses were conducted only for residential and outpatient drug-free clients.

The analyses for the residential and outpatient drug-free modalities were conducted separately, because each modality treats very different client populations and has a different approach to treatment. Furthermore, the analyses were limited to clients in the five cities that had TASC programs. The analyses of intake data compare with those referred to treatment through TASC programs (n=502), those involved with the criminal justice system but not TASC at admission to treatment (n=855), and clients without any current involvement with the criminal justice system or TASC (n=1,078).

No direct self-report measure of a client's perception of legal pressure is included in the TOPS data. Clients with various types of involvement with the criminal justice system were distinguished using self-report questionnaire items on TASC supervision, current legal status, and source of referral. The responses to these items were

TABLE 1. *Referral source by modality*

Referral Source	Outpatient Methadone	Outpatient Drug-Free	Residential
	Percent	Percent	Percent
Self-referral	47.7	19.4	24.2
Family/Friends	31.2	20.6	19.0
TASC or Other Criminal Justice System	2.6	30.9	31.2
Other	18.5	29.1	25.6
	100.0	100.0	100.0
n=	4,184	2.914	2.991

SOURCE: Data are from entire TOPS population, 1979-1981,

examined to develop definitions of (1) TASC clients; (2) other (non-TASC) criminal justice system clients; and (3) clients with no legal involvement.

TASC clients were defined as those who reported being under TASC supervision at admission to a treatment program. Non-TASC criminal justice system clients were those who did not report being under TASC supervision but reported a current legal status of probation, parole, on bail, in jail or prison, or identified their principal source of referral to treatment as an agent of the criminal justice system, such as an attorney, judge, or probation or parole officer. Clients not classified as TASC or non-TASC criminal justice clients were assumed to have no legal involvement at admission to treatment.

These comparison groups facilitate the differentiation of TASC effects from the effects of other criminal justice system involvement on client behaviors during and after treatment. Data are drawn from four periods: the year before treatment, the first 3 months in treatment, the second 3 months in treatment, and the first year after treatment.

All TASC clients who were admitted to one of the outpatient drug-free and residential programs in 1979 and 1980 and who completed an intake interview were selected into the followup samples. Clients involved with the criminal justice system other than through TASC

and those who currently were not involved with the criminal justice system were randomly selected at rates that satisfied the sampling precision requirements for the overall TOPS followup samples. Samples of 603 of 1,281 outpatient drug-free and 496 of 1,154 residential clients were interviewed 1 year after leaving treatment.

Descriptive analyses comparing TASC, non-TASC criminal justice, and no legal involvement clients on legal status and prior treatment *are* presented. More detailed comparisons of sociodemographic characteristics, drug use, and other behaviors reported in Collins et al. (in press) are summarized.

Multivariate analyses were also conducted to identify the influence of TASC or other criminal justice system involvement on retention and outcomes during and after treatment, particularly predatory illegal acts. Prior research has found that all crime decreases after treatment, and that crimes that are directly drug related, most particularly drug sales, decrease much more than other crimes (Ball et al. 1981). For that reason, analyses of crime were restricted to the predatory illegal acts that victimize members of the general population (assault, robbery, burglary, theft, forgery, fraud, embezzlement, and dealing in stolen property).

CHARACTERISTICS OF CLIENTS DIFFERING IN CRIMINAL JUSTICE SYSTEM INVOLVEMENT

Systematic differences in legal status were found between the three categories of clients entering treatment in the outpatient drug-free and residential modalities. About one-half of TASC clients in residential programs and non-TASC criminal justice clients in both outpatient drug-free programs and residential programs were on probation at the time of admission to drug abuse treatment (table 2). Half of the TASC clients in outpatient drug-free programs were on bail, indicating pretrial or presentencing diversion. These findings indicate that TASC and non-TASC criminal justice clients were referred to the two drug abuse treatment modalities at different stages of the legal process.

The criminal justice system clients, especially TASC clients (85 percent), were disproportionately male, compared with no legal involvement clients (57 percent). Probably, because they were not considered eligible, few clients under 18 were in TASC. TASC and other criminal justice clients in residential and outpatient drug-free modalities were younger (average age 25) than were no legal

TABLE 2. *Legal status at intake by criminal justice system involvement*

Legal Status	Outpatient Dtua-Free		Residential	
	TASC	Non-TASC Criminal Justice	TASC	Non-TASC Criminal Justice
	Percent	Percent	Percent	Percent
No Legal Status	9.1	6.0	5.1	2.5
Probation	20.3	57.8	57.0	48.8
Parole	8.1	13.2	5.7	8.8
On Bail	51.3	12.0	6.3	17.2
In Jail	5.9	3.7	23.4	19.7
Other	5.3	7.3	2.5	3.0
	100.0	100.0	100.0	100.0
n=	328	338	174	519

SOURCE: 1979 and 1980 TOPS Admission Cohorts.

involvement clients (average age 27). Despite their lower average ages, far more outpatient drug-free clients in each legal involvement category had at least a high school diploma, compared with their counterparts in residential treatment. No major differences in drug-use patterns were noted.

The treatment histories of clients in different legal involvement categories in each modality appeared to be very similar (see table 3). Residential clients were far more likely than outpatient drug-free clients to have had previous drug abuse treatment experience (about 50 percent in each criminal justice system involvement category) and three or more previous treatment episodes (21 to 25 percent). Within modalities, there was little difference in the prior treatment histories of the three categories of clients.

These descriptive analyses suggest the hypothesis that there are few major differences between criminal justice system clients and clients with no legal involvement. To examine this hypothesis further, multivariate analyses were conducted to identify factors that were significantly associated with self-reported referral through TASC or another criminal justice mechanism. The characteristics of 30 percent

TABLE 3. *Prior drug treatment by TASC/criminal justice system involvement*

Number of Prior Admissions	Outpatient Drug Free			Residential		
	TASC	Non-TASC Criminal Justice	No Legal Involvement	TASC	Non-TASC Criminal Justice	No Legal Involvement
	Percent	Percent	Percent	Percent	Percent	percent
None	71.6	62.6	70.5	50.0	45.2	49.5
One	12.3	15.3	11.6	18.5	18.1	17.6
Two	4.2	7.1	6.1	10.3	11.4	11.3
Three or More	11.9	14.9	11.8	21.2	25.3	21.6
	100.0	100.0	100.0	100.0	100.0	100.0
n=	328	336	617	174	519	461

SOURCE: 1979 and 1980 TOPS Admission Cohorts.

of the clients who reported the criminal justice system as the primary source of referral are contrasted with the other 70 percent of the clients, who reported other sources. This procedure more directly tests the basic hypothesis by focusing on the effect of active referral by the criminal justice system. Odds ratios for sex, age, race, drug-use pattern, and prior treatment were calculated by logistic regression procedures.

Table 4 presents the comparisons where significant differences were found. In general, males, clients aged 21 to 25, and clients with no prior treatment were more likely to be involved with the criminal justice system. Marijuana or alcohol users were more likely to be referred than heroin users, especially in outpatient drug-free programs. Clients who reported no use or less than weekly use of alcohol or drugs in the year before treatment (minimal users) had the highest relative likelihood of referral. The high rate of criminal justice referral of marijuana/alcohol users and minimal users may be attributable to the fact that criminal justice system clients are likely to be referred to treatment early in their drug-use careers, or that many criminal justice clients (especially those in residential programs) had recently been in jail or prison and were unlikely to be more than minimal users of any drug. A second multivariate analysis, comparing all criminal justice system clients with those with no legal involvement, yielded similar results.

BEHAVIOR BEFORE AND DURING TREATMENT

Given the high rate of illegal activity of criminal justice clients before treatment, reductions during treatment have societal benefits, even if the reductions are not maintained after the clients leave treatment. Table 5 displays percentages of primary problem drug use, depression symptoms, predatory illegal acts, and full-time employment reported by outpatient drug-free clients in the year before treatment and during the first 6 months of treatment.

Outpatient drug-free TASC clients reported improvement during treatment for each outcome measure of table 5; clients with lower percentages reported regular use of their primary problem drug, fewer reported depression symptoms, only a few reported predatory illegal acts, and more reported working full time most of the time. The other outpatient drug-free criminal justice clients also improved after entering treatment. Primary problem drug use and depression symptoms decreased, and fewer reported predatory illegal acts. There was little or no improvement in full-time work during the first 6 months

TABLE 4. *Effects of demographic characteristics and pretreatment behaviors on the odds of criminal justice system referral for outpatient drug-free and residential clients*

Risk Factors	Outpatient Drug Free (n=1,281)	Residential (n=1,154)
Male vs. Female	2.51***	1.65***
White vs. Other Race	.74**	1.43***
Age 21-25 vs. 31 and Over	2.07***	1.62***
No Prior Treatment vs. Three or More Prior Treatments	1.38*	1.60**
Minimal Users vs. Alcohol/ Marijuana	1.26	2.57***
Heroin vs. Alcohol/Marijuana	.53***	.87

*p<.05.

**p<.01.

***p<.001.

SOURCE: 1979 and 1980 TOPS Admission Cohorts.

in treatment for other criminal justice clients. The outpatient drug-free clients with no legal involvement also showed improvement in each outcome category. Their improvements, however, were not as marked as those of one or both of the legally involved client groups for each outcome measure. The results of these findings during treatment must be cautiously interpreted, however, because the numbers of cases were small, and other factors such as opportunity to use drugs, work or commit crimes were not integrated into the analysis. Despite these limitations, the findings are promising; results indicate improvement in almost every treatment-outcome measure.

Data for residential clients are not shown in a table because clients who are monitored 24 hours a day have virtually no drug use or illegal activity and usually are not allowed to work outside the program, at least in the early stages of treatment. TASC clients and other criminal justice clients reported less reduction in depression symptoms during treatment, however, than did similar clients in outpatient drug-free programs or clients who are not legally involved in either residential *or* outpatient drug-free programs.

TABLE 5. *Outpatient drug-free clients who reported weekly or daily use of their primary problem drug, depression symptoms, predatory illegal acts, and full-time employment 75 percent of the time for pretreatment and intreatment periods*

	Weekly or Daily Use of Primary Drug	Depression Symptoms	Predatory Illegal Acts	75 Percent Full-Time Work
	TASC			
Year Before Treatment	65.1	44.2	63.2	29.5
First 3 Months in Treatment	15.0	25.0	4.9	46.5
3 to 6 Months in Treatment	12.5	16.3	2.3	59.1
n=	41	43	40	43
	Non-TASC Criminal Justice			
Year Before Treatment	54.8	36.7	40.0	25.0
First 3 Months in Treatment	17.9	6.5	17.2	22.6
3 to 6 Months in Treatment	14.3	12.9	11.5	26.6
n=	29	31	26	30

TABLE 5. (Continued)

	Weekly or Daily Use of Primary Drug	Depression Symptoms	Predatory Illegal Acts	75 Percent Full-Time work
	No Legal Involvement			
Year Before Treatment	76.4	72.5	34.9	41.2
First 3 Months in Treatment	29.4	45.1	6.5	52.0
3 to 6 Months in Treatment	21.6	39.2	6.9	49.0
n=	50	50	50	50

NOTE: Only clients who remained in treatment at least 6 months are included in this table.

SOURCE: 1979 and 1980 TOPS Admission Cohorts.

TREATMENT RETENTION

Treatment retention is an important contributor to treatment effectiveness (Simpson 1981; Hubbard et al. 1988). If an individual leaves treatment within a few days, it is unlikely that treatment has permanently changed the characteristics or conditions that are related to his or her drug problem. Treatment lengths of 6 or more months were found necessary to produce significant reductions in drug use (Hubbard et al. 1988). Furthermore, as seen in the preceding table, criminal behavior is reduced while individuals are in treatment (Demaree and Neman 1976; Long and Demaree 1975; Harwood et al., this volume).

Analyses described in Collins et al. (in press) showed that more TASC clients stayed in outpatient drug-free and residential treatment at least 3 months (48 percent and 57 percent) than did other criminal justice clients (35 percent and 51 percent) and clients with no legal involvement (30 percent and 41 percent). The differences between TASC and other criminal justice clients were not statistically significant beyond the .05 probability level. The differences between TASC clients and clients with no legal involvement were statistically significant beyond the .05 level in both modalities. All differences were statistically significant when TASC and other criminal justice categories were combined into a single category and compared to the no legal involvement groups within each modality. These results suggest that both TASC and non-TASC criminal justice involvement contributed to longer retention in treatment.

As described previously, there are systematic differences in the characteristics and behaviors of clients in the three legal involvement categories. These differences, not the TASC programs or criminal justice involvement, may explain the differential retention findings. Regression analyses were conducted to address the effects of legal pressure on treatment retention more fully.

The multiple regression model included variables controlling for sex, age, race, number of prior treatment admissions, and drug-use pattern in the year before treatment. Both involvement with the criminal justice system and TASC referral were associated with longer retention. Table 6 shows that TASC referral to the outpatient drug-free modality was associated with longer retention than other criminal justice involvement, although both variables predicted longer retention. After controlling for the other variables in the regression model, outpatient drug-free TASC clients stayed 45 days longer and

TABLE 6. *Estimated effect on retention in treatment of criminal justice referral*

Category of Criminal Justice Involvement	Outpatient Drug free n=1,281 Additional Days	Residential (n=1,154) Additional Days
TASC vs. No Legal Involvemant	44.6***	50.1**
Non-TAX Criminal Justice vs. No Legal Involvement	16.7*	51.0***

*=F ratio significant>.05.

**=F ratio significant>.01.

***=F ratio significant>.001.

SOURCE: 1979 and 1980 TOPS Admission Cohorts.

other criminal justice clients stayed 17 days longer than clients with no legal involvement.

TASC and other criminal justice residential clients stayed longer than clients with no legal involvement. After controlling for the other variables in the regression model, TASC clients stayed 50 days longer and other criminal justice clients stayed 51 days longer than clients with no legal involvement. Based on the magnitude of the unstandardized regression estimates, the effect of TASC on treatment retention was stronger in the residential than in the outpatient drug-free modality.

SERVICES RECEIVED AND TREATMENT SATISFACTION

Clients entering treatment from the criminal justice system may have a unique set of treatment needs that require more intense and different types of services. Furthermore, the degree of coercion used to get them to enter and remain in treatment may affect their treatment responses. There are clear differences between the outpatient drug-free and residential modalities in the number (see table 7) and type (see table 8) of services delivered to each client group during the first 3 months of treatment.

Outpatient drug-free clients with no legal involvement were twice as likely to receive three or more types of services (29 percent) as

were TASC referrals (15 percent) or other criminal justice clients (17 percent). Over a third of the TASC clients and almost 3 out of 10 other criminal justice clients in outpatient drug-free programs did not report receiving any of the 7 types of services. This pattern of lower service delivery to TASC and other criminal justice clients was also found for medical, psychological, and family services. TASC clients (37 percent) were also less likely to receive psychological services than other criminal justice clients (53 percent). Program directors and counselors may have assumed that TASC clients needed fewer services than other clients, because TASC clients had less extreme drug-use patterns. The high reports of drug-related problems by TASC clients entering outpatient drug-free programs make such an assumption questionable.

There were no major differences by criminal justice involvement in the number of service types or the specific services delivered in residential programs. In some cases, TASC clients reported receiving more services. The similar level of services across all legal involvement categories is consistent with the uniform therapy process for every client in a residential program.

Three measures of satisfaction were included during intreatment interviews in TOPS: help in reducing drug use; help with other problems; and general satisfaction with treatment. Clients with no legal involvement were more likely to be very satisfied with their treatment than TASC and other criminal justice clients. In general, both outpatient drug-free and residential TASC clients seemed somewhat less satisfied with all aspects of treatment. About half the TASC clients and other criminal justice clients were very satisfied (see table 9) and felt treatment had helped them reduce their drug use and had helped them with other problems.

POSTTREATMENT CRIMINAL BEHAVIOR AND OTHER OUTCOMES

The analyses in this section focus on predatory illegal acts before and after treatment. The effects of criminal justice system involvement on other outcomes including drug use are also summarized.

Involvement in Predatory Illegal Acts

Multivariate analyses were conducted to compare the impact of TASC and other criminal justice system involvement on the number of predatory illegal acts in the year after treatment. Regression models were developed which included sex, age, race/ethnicity,

TABLE 7. *Number of types of services by TASC/criminal justice system involvement*

Number of Types of Service	Outpatient Drug Free			Residential		
	TASC	Non-TASC Criminal Justice	No Legal Involvement	TASC	Non-TASC Criminal Justice	No Legal Involvement
Percent	Percent	Percent	Percent	Percent	Percent	Percent
None	35.4	27.6	16.1	4.4	10.4	7.2
1-2	49.5	55.1	54.6	46.1	43.5	43.9
3 or More	15.1	17.3	29.1	55.5	46.1	48.9
	100.0	100.0	100.0	100.0	100.0	100.0
n =	156	117	164	99	264	166

NOTE: Only clients who remained in treatment at least 3 months are included in this table.

SOURCE: 1979 and 1980 TOPS Admission Cohorts.

TABLE 8. *Types of services by TASC/criminal justice system involvement*

Types of Service	Outpatient Drug Free			Residential		
	TASC	Non-TASC Criminal Justice	No Legal Involvement	TASC	Non-TASC Criminal Justice	No Legal Involvement
	percent	Percent	Percent	Percent	Percent	Percent
Medical	16.5	27.5	35.8	83.1	86.6	83.8
Psychological	37.2	52.6	72.7	61.2	56.4	50.8
Family	26.6	23.2	51.5	36.9	29.7	43.0
Legal	5.5	9.7	1.2	26.2	32.0	4.7
Education	10.7	18.1	12.4	41.2	44.3	45.2
Employment	14.4	9.7	13.4	16.0	14.7	26.6
Financial	9.8	3.2	6.2	22.8	9.2	12.2
	Muitiple Response					
n =	156	117	184	99	264	188

NOTE: Only clients who remained in treatment at least 3 months are induded in this table.

SOURCE: 1979 and 1980 TOPS Admission Cohorts.

TABLE 9. *General satisfaction with treatment by TASC/criminal justice system involvement*

Level of Satisfaction	Outpatient Drug Free			Residential		
	TASC	Non-TASC Criminal Justice	No Legal Involvement	TASC	Non-TASC Criminal Justice	No Legal Involvement
	Percent	Percent	Percent	Percent	Percent	Percent
Very Satisfied	46.2	40.7	60.0	49.1	46.9	54.1
Somewhat Satisfied	40.2	46.7	36.2	45.1	51.3	44.5
Not At All Satisfied	3.6	2.6	1.8	5.8	1.8	1.4
	100.0	100.0	100.0	100.0	100.0	100.0
n =	156	117	164	99	264	166

NOTE: Only clients who remained in treatment at least 3 months are included in this table.

SOURCE: 1979 and 1980 TOPS Admission Cohorts.

pretreatment drug-use patterns, previous treatment admissions, TASC referral or other criminal justice involvement, length of time in treatment, and drug abuse treatment after the TOPS treatment experience. In addition, reports of predatory illegal acts in the year before treatment were subject to comparative multivariate analysis along with regression model data.

The regression results in table 10 show how particular characteristics are associated with posttreatment predatory illegal acts. A risk factor greater than one indicates that an individual with a particular characteristic is more likely to commit predatory illegal acts than similar individuals without that characteristic. A risk factor less than one indicates an individual with that characteristic is less likely to commit predatory illegal acts posttreatment.

The former clients were categorized as committing one or more predatory illegal acts in the year after leaving treatment or as not committing any such act. Table 10 shows the effects of comparative risk for the four major variables of interest in this analysis: prior treatment, pretreatment predatory illegal acts, retention in treatment, and criminal justice system involvement.

Outpatient drug-free clients who had been in drug abuse treatment before TOPS were 1.67 times ($p<.05$) more likely to commit predatory illegal acts after TOPS treatment than those who had not been in drug abuse treatment previously. An opposite (though not statistically significant) relationship was found for residential clients; those with prior treatment were .73 times ($p=<.20$) as likely to commit predatory illegal acts in the year after treatment. This suggests that the risk of posttreatment predatory illegal acts is somewhat higher when the first treatment admission is to a residential program through the criminal justice system. On the other hand, clients with prior treatment experiences may be more successful in residential treatment.

Short retention was strongly related to higher posttreatment involvement in predatory illegal acts. Both outpatient drug-free and residential clients staying in treatment 4 weeks or less almost doubled their chances of committing predatory illegal acts compared with those staying in treatment more than 3 months ($p<.05$). A stay in treatment between 4 and 13 weeks increased the risk of committing predatory illegal acts 1.25 times ($p=.42$) for outpatient drug-free clients and 2.43 times ($p<.001$) for residential clients.

TABLE 10. *Effects of treatment and criminal justice system involvement on the odds of committing predatory illegal acts in the year after treatment*

Risk Factors	Outpatient Drug Free (n=603)	Residential (n=498)
Prior Treatment		
Prior Treatment for Drug Abuse vs. No Prior Treatment	1.67*	.73
Predatory Illegal Acts		
1-10 Predatory Acts Before Treatment vs. No Acts	2.59***	1.58
11 or More Predatory Acts Before Treatment vs. No Acts	4.33***	2.26**
Retention in Treatment		
4 Weeks or Less vs. 3 Months or More	1.91**	1.83*
4-13 Weeks vs. 3 Months or More	1.25	2.46***
Criminal Justice System Involvement		
TASC vs. No Legal Involvement	1.10	1.22
Non-TASC Criminal Justice System Other than TASC vs. No Legal Involvement	1.54	.72

*p<.05.

**p<.01.

***p<.001.

SOURCE: 1979 and 1980 TOPS Admission Cohorts.

The TASC and criminal justice involvement variables did not predict significant variation in the likelihood of posttreatment predatory illegal acts when the other factors in the models were controlled. Similar findings were obtained when time-at-risk corrected measures of number of predatory illegal acts were used as the dependent variables (Marsden et al. 1986). Longer retention is associated with lower numbers of predatory illegal acts so, by increasing retention,

criminal justice referrals may have a greater impact on posttreatment predatory illegal acts than is indicated in the regression analysis.

Other Outcomes

Criminal justice system involvement may affect drug use, depression, employment, and other client behaviors. The effect of a legal source of referral rather than self-referral for other behaviors in the year after treatment was examined in a multivariate model. The results indicated that a legal source of referral significantly affected weekly or daily use of the primary problem drug but not the use of other drugs, depression, criminal behavior, or employment. After treatment, criminal justice system-referred residential clients were .62 times ($p<.05$) less likely and outpatient drug-free clients were .61 times ($p<.10$) less likely to use their primary problem drug weekly or more often than their self-referred counterparts. These results suggest that a more elaborate model of the direct and indirect effects of criminal justice involvement is needed to better delineate the overall impact of criminal justice system involvement.

CONCLUSIONS

The results of the analyses support the basic belief that criminal justice clients do as well or better than other clients in drug abuse treatment. TASC programs and other formal or informal criminal justice system mechanisms appear to refer individuals who had not previously been treated and many who were not yet heavily involved in drug use. This early interruption of the criminal and drug-use careers may have important long-term benefits in reducing both crime and drug use among treated offenders. Criminal justice system involvement also helps retain clients in treatment. The estimated 6 to 7 additional weeks of retention for TASC referrals provided programs with considerably more time for rehabilitation efforts. There also seemed to be more substantial changes in behavior during treatment for other criminal justice clients. These findings support efforts to continue and expand criminal justice programs such as TASC. Other results suggest the need for careful assessment of how TASC and other criminal justice programs might be improved.

TASC programs have a broad mandate to identify and refer drug abusers in the criminal justice system to treatment. It is clear, however, that a large number of individuals entering drug abuse treatment are involved with the criminal justice system but not a TASC program. Whether these individuals were not identified by

TASC program. Whether these individuals were not identified by TASC; were not considered to be eligible by TASC; were not allowed to enroll for other reasons, such as the decision of a judge or prosecutor; or chose not to participate in TASC needs to be studied. The TOPS data do not indicate the structure and process of formal criminal justice programs and referral processes other than TASC. Further, studies are needed to identify these mechanisms and to determine how they complement the TASC programs.

One major finding in this research is that few TASC clients and other criminal justice clients enter outpatient methadone programs. The reasons for the low numbers in methadone programs need to be explored. There appear to be many heroin addicts in the criminal justice system who could benefit from methadone treatment to reduce their criminal behavior.

A second finding is that TASC and other criminal justice system clients in outpatient drug-free programs received fewer services than other clients in the same program. Although TASC and other criminal justice system clients reported fewer drug-related problems than clients with no legal involvement, they still reported a wide array of problems. Differential service delivery for clients from various referral sources should be carefully examined.

A third finding is that, although treatment itself reduced crime, those referred by TASC or involved with the criminal justice system did not report fewer predatory illegal acts after treatment than those who were not currently involved with the criminal justice system. The analyses described in this report may not fully identify the positive effects of TASC and other criminal justice system involvement on criminal behavior. Retention, which was positively related to reduction in risk of predatory illegal acts and arrest, was controlled in the multivariate analyses. Thus, the indirect effect of TASC and other criminal justice system involvement through increased retention was not estimated. A more complex model such as path analysis would be a more appropriate way to demonstrate the overall impact of TASC and other criminal justice involvement. It should be noted that TASC and other criminal justice clients appeared to be at earlier stages of their drug-use and criminal careers. It is reasonable to expect that drug abuse treatment moderates the increasing seriousness of drug use and criminal behavior for younger TASC and other criminal justice clients. More intensive aftercare services may be needed to maintain the reduction in drug abuse and crime achieved during treatment. An appropriate new role for TASC might be the

provision or coordination of long-term aftercare services to help reinforce the behavior changes achieved during treatment.

TASC programs have been shown to identify and refer more individuals than would be expected from a less formal, nonprogrammatic referral system. Furthermore, some potential differential outcomes of TASC clients and other clients involved in the criminal justice system may be obscured by differences in clients' motivation for treatment which were not included in the analyses for this chapter. The evidence of the efficacy of criminal justice referral demonstrated in the TOPS data support the belief that a formal and comprehensive program such as TASC should produce benefits that far outweigh their costs.

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Legal Status and Long-Term Outcomes for Addicts in the DARP Followup Project

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INTRODUCTION

From 1969 to 1973 approximately 44,090 drug abusers were admitted to 52 federally funded and community-based treatment agencies in the Drug Abuse Reporting Program (DARP). Over the course of several years, a series of during-treatment studies were conducted on this treatment population (Sells 1974; Sells and Simpson 1976), and samples of these drug abusers were later followed up at about 6 years and again at 12 years after admission to treatment (Simpson and Sells 1982; Simpson et al. 1986a; Simpson et al. 1986b). This chapter examines these longitudinal data concerning the influence of judicial status on client performance during and after treatment.

Previous findings from DARP during-treatment evaluations and followup research data relevant to legal status are reviewed, and new analyses are presented that focus specifically on pretreatment judicial status in relation to treatment retention and long-term behavioral outcomes, including opioid use, criminality, and employment. However, the DARP data did not emanate from civil commitment agencies, and there were differences among agencies, with regard to the role legal status played in treatment referrals. Overall, 40 percent of the DARP treatment population were admitted with some form of legal status, such as probation, awaiting trial, or parole, but the client's legal classification was not necessarily reflected in the source of referral. Some of the legally involved clients reported being referred to DARP treatment from courts, parole/probation officers, and police but others did not. Thus, client motivations recorded retrospectively in the 12-year followup as major reasons for entering drug abuse treatments were also examined in relation to treatment history and long-term outcomes.

DESCRIPTION OF THE SAMPLE

Data are presented below for black and white male daily opioid users, which is the subsample most representative of the DARP population. For instance, among the almost 44,000 admissions to the DARP, 75 percent were male, 81 percent were either black or white, and 64 percent had used opioid drugs (heroin, illegal methadone, or other opiates) daily during the P-month pretreatment period. Male addicts were also the major focus of the 12-year foilowup study, even though a subsample of female addicts was studied in detail by Marsh and Simpson (1986). In the present study, therefore, the research sample was limited to male daily opioid users. This limitation reduces the confounding of results on drug use, criminality, and employment outcomes by avoiding baserate differences involving males/females and addicts/nonaddicts.

Out of the nearly 44,000 original DARP admissions, 27,460 subsequently entered treatment with acceptable data and were studied in the DARP during-treatment research phase (Sells 1974; Sells and Simpson 1976). Table 1 shows that among the subgroup of 11,920 black and white male addicts in this population, 5,704 were treated in methadone maintenance (MM) programs, 1,767 were treated in therapeutic communities (TC), 1,232 were treated in outpatient drug-free (DF) programs, and 3,217 were treated in outpatient detoxification (DT). This treatment sample is described in table 1 with regard to race, age, legal status at admission, source of referral, days spent in treatment before termination, and reasons for discharge.

Followup Samples

The 12-year longitudinal data were obtained from a cohort sample of opioid addicts admitted to DARP treatment programs during the period of June 1969 through May 1972. However, the first wave of (6-year) followup interviews was conducted with a stratified random sample of 4,107 addicts and nonaddicts from 25 different DARP agencies located across the United States (Simpson and Joe 1977); 87 percent of the cases were located, and successful interviews were completed with 3,131 respondents. The 6-year DARP foilowup studies (Simpson and Sells 1982) focused on evaluation of posttreatment outcomes. Sample stratification factors for this followup study included DARP treatment classification, time in treatment, race/ethnic group, sex, age, and treatment agency or clinic. Clients were selected to represent MM, TC, DF, and DT programs, as well as an intake only (IO) group, whose members completed intake and

TABLE 1. *Description of black and white male daily opioid users admitted to DARP during 1969-1973*

	Type of DARP Treatment (percent)				Total (percent)
	MM	TC	DF	DT	
Race:					
Black	80	53	60	66	70
White	20	47	40	34	30
Age:					
Under 18	1	7	8	4	4
18-20	11	26	22	19	16
21-25	35	40	43	45	39
26-30	17	10	12	13	15
Over 30	36	17	15	19	26
Legal Status of Admission:					
None	66	34	48	55	57
Probation	16	35	23	22	21
Parole	5	9	9	8	7
Awaiting Trial	12	22	20	15	15

TABLE 1. (Continued)

	Type of DARP Treatment (percent)				Total (percent)
	MM	TC	DF	DT	
Source of Referral:					
Legal/Court	7	31	22	10	13
Family/Friends	38	24	26	30	32
Other	56	45	52	60	55
Days in Treatment:					
1-30	5	26	25	44	21
31-90	10	24	30	40	22
91-365	36	32	36	15	30
Over 365	49	18	7	1	27
Reason for Treatment Discharge:					
Completed	28	20	13	21	23
Quit/Expelled	49	71	77	73	61
Jailed	6	2	4	3	5
Other	17	7	6	3	11
Sample Sizes:	5,704	1,767	1,232	3,217	11,920

admission procedures but did not return for treatment in the DARP. The IO group in this study was viewed as an important comparison group but not as a control group, since treatment samples were not formed through random assignment.

From the completed 6-year interviews, a second wave of 697 DARP admissions was selected for a 12-year followup study of opioid addiction careers. Sample selection was based on pre-DARP drug use history, treatment classification, race/ethnic group, sex, and treatment agency or clinic. Only clients who were daily opioid users at the time of DARP admission were included in the 12-year study (this sampling restriction was made, in part, because of funding limitations). The sample targeted equal numbers of black and white males from all five treatment groups; black and white females were included only in the MM treatment group due to sampling limitations in other treatments. The final sample was drawn from 18 different treatment agencies, as explained in more detail by Simpson (1984a).

The fieldwork for the DARP followup studies, involving the location and interviewing, was carried out under contract with the National Opinion Research Center. For the 12-year study, 558 (80 percent) of the target sample were located during 1982 and 1983,490 (70 percent) were interviewed after granting informed consent, 52 (8 percent) were deceased, and 13 (2 percent) refused to be interviewed. The remaining 142 (20 percent) were not located before time and resources for the fieldwork ran out. Analysis of intake and 6-year followup data, however, revealed no evidence of systematic sampling bias associated with these nonlocated cases (Simpson 1984a).

The 1 P-year followup interviews were conducted face-to-face with trained interviewers who followed strict procedures to protect confidentiality. The average time for each interview was about 2 hours, for which the respondent was paid $15. The interview focused on behavioral changes and outcomes over time, as well as historical assessments of psychological and social factors involved throughout their addiction careers. The major treatment outcomes measured were illicit drug use, drug abuse treatment, alcohol use, employment, and criminality. Comparisons of self-reported information with urinalysis results, criminal justice records of post-DARP incarcerations, and checks for internal consistency indicated a high level of data reliability and validity (Simpson 1984b).

The final interviewed sample of 490 former opioid addicts included 18 percent females and 62 percent males and 51 percent blacks and 49

percent whites, with a median age of 34 at the time of the 12-year followup interview (19 percent were over 40 years old). As previously noted, the present study includes only male addicts (n=405) because females were fewer in number and because they differed systematically from males on several behavioral measures, particularly employment and criminality.

DARP TREATMENT ADMISSIONS AND PROGRAM PERFORMANCE

About 40 percent of the opioid addicts who entered treatment in the DARP during 1999 to 1972 reported some form of legal involvement at the time of admission; 17 percent were on probation, 14 percent were awaiting trial, and 8 percent were on parole. There were large differences between treatment modalities, however. For instance, only 34 percent of admissions to MM were legally involved, compared to 66 percent for TC, 52 percent for DF, and 45 percent for DT. These differences, especially between MM and TC programs, were further illustrated by the sources of treatment referral that were reported by clients at the time of their admission. For MM programs, 7 percent of the admissions were court referred and 47 percent reported being self-referred; for TC programs, these percentages were 31 percent and 30 percent (Simpson et al. 1978).

Early DARP studies of retention in treatment conducted by Joe (1974), Joe and Simpson (1978a), and Joe and Simpson (1978b) examined legal involvement at admission as a predictor variable. These studies found that predictions of treatment tenure from legal status were inconsistent across treatment categories and were usually statistically nonsignificant. Legal status was also unrelated to during-treatment drug and alcohol use, employment, and criminality (Spiegel and Sells 1974; Gorsuch et al. 1976a; Gorsuch et al. 1976b). Thus, legal status at intake, as well as source of referral to treatment, was not a useful predictor in the DARP during-treatment research.

Since these earlier studies of legal status were based on combined samples of addicts and nonaddicts in a multiple regression analytic model, the present study narrowed the focus to black and white male addicts. In particular, treatment performance indicators (length of time in treatment and reason for discharge) were compared between clients who were legally involved when admitted to DARP (i.e., on parole, probation, or awaiting trial) and those who had no legal status. These comparisons answered the question of whether legal

pressure at the time of treatment admission was associated with (1) the length of time the addict remained in treatment, and (2) the addict's reasons for leaving.

The findings are summarized for each treatment modality in the upper portion of table 2. In short, legal status and treatment tenure showed no significant relationship (using chi-square) in any of the four treatment groups. Reason for discharge was also generally unrelated to legal status. However, MM clients with legal status had slightly lower treatment completion rates (25 percent vs. 30 percent for those without legal status) and higher rates of termination due to incarceration in jail (10 percent vs. 4 percent for those without legal status); although these were statistically significant differences ($p<.01$), they have small practical implications.

To test for the further possibility that legal status might be differentially important for certain age ranges, similar analyses were conducted separately within age categories (i.e., under 18, 18 to 25, and over 25). Again, the results showed no evidence that pretreatment legal pressures were related to retention and to cause of discharge.

POSTTREATMENT OUTCOMES

The first wave of DARP followup interviews was conducted about 6 years after treatment admission. The focus was on using posttreatment outcomes to assess treatment effectiveness, especially in the first year after termination from DARP treatment. Simpson and Sells (1982) reported that clients in the major treatment modalities (MM, TC, and DF) had significantly better posttreatment outcomes on opioid use, criminality, and employment than clients in DT and the comparison group of IO clients. Longer retention in these treatments was also predictive of better outcomes.

Client demographic and background measures used in the DARP provided small but statistically significant predictions of posttreatment outcomes. Examination of pre-DARP legal status, in relation to posttreatment outcomes, is summarized in the lower portion of table 2. In the MM, TC, and DF treatment groups, jail or prison was significantly more likely in the first year after DARP among those who were legally involved before admission. This relationship is not surprising, since some of these incarcerations were probably the direct result of pre-DARP legal problems. None of the other outcomes, however, in years 1 or 6, were significantly related to pre-DARP !egal status. In addition, analysis of variance comparing

TABLE 2. *Treatment performance and outcome indicators by legal involvement at time of admission to DARP treatments*

	MM Clients		TC Clients		DF Clients		DT Clients	
	Some	None	Some	None	Some	None	Some	None
			During-Treatment Performance (percent)					
Days in DARP Treatment:								
1-30	5	5	27	25	24	24	44	43
31-90	10	10	23	26	31	29	40	41
91-365	37	34	31	32	38	40	15	15
Over 365	48	51	19	17	7	7	1	1
Reason for DARP Discharge:								
Quit/Expelled	50	48	72	71	77	77	73	73
Completed	25	30	20	19	12	13	19	22
Jailed	10	4	2	1	5	3	5	2
Other	15	18	6	9	6	7	3	3
Sample Sizes:	1,882	3,718	1,127	586	624	567	1,395	1,744
			Posttreatment Outcomes (percent)					
First Year Posttreatment:								
Any Opioid Use	56	56	57	55	57	76	76	73
Daily Opioid Use	38	35	39	35	41	48	63	63
Any Jail/Prison	33	20	38	24	49	25	36	39
Employed 6 Months	57	57	64	63	53	50	43	41

TABLE 2. (Continued)

	MM Clients		TC Clients		DF Clients		DT Clients	
	Some	None	Some	None	Some	None	Some	None
	Posttreatment Outcomes (percent)							
Year 6 Post-DARP:								
Any Opioid Use	42	42	39	33	33	37	48	54
Daily Opioid Use	25	22	23	15	19	22	31	31
Any Jail/Prison	29	26	29	25	32	32	36	36
Employed 6 Months	64	62	71	73	61	63	74	56
Sample Sizes:	242	432	295	135	77	56	47	82

NOTE: "Some" legal involvement indicates the addict was on parole, probation, or awaiting trial when admitted to DARP.

posttreatment outcome scores between clients with specific types of legal status (parole, probation, awaiting trial, and not legally involved) also indicated that there were no significant differences associated with subcategories of legal status.

In year 12 after DARP treatment admission, the followup sample contained 39 percent who had used opioid drugs (including 26 percent who had used opioids daily) in 1 or more months during that year. Marijuana was used in year 12 by 61 percent, and other nonopioid drugs (mostly cocaine) were used by 47 percent, while 31 percent had spent time in drug abuse treatment during the year (Simpson et al. 1988).

With regard to other outcomes, 27 percent consumed an average of over 4 ounces of 80-proof liquor equivalent per day, 29 percent spent time in jail or prison, and 64 percent worked during 6 or more months (28 percent had not worked at all in year 12). As reported in more detail by Simpson et al. (1986), these outcome levels for year 12 changed very little from those in year 6, but this was not merely a result of the long-term stability of outcomes over time. For instance, about one-half of the sample maintained the same level of opioid use from year 6 to year 12 (42 percent were abstainers in both years and 9 percent used opioids daily in both years), but one-fourth increased their use and the remaining one-fourth decreased their use across this time period.

Lehman and Simpson (1984) reported that long-term predictions of 12-year outcomes, that is, using predictors based on pre-DARP information, are generally poor. For instance, even the significant treatment group differences in behavioral outcomes found during the first year following DARP "fade out" over time as other treatments and life changing events accumulate. It is not surprising, then, that most of the year 12 outcome measures were also statistically unrelated to pre-DARP legal status of black and white male addicts. These data are summarized in table 3, and they show that year 12 opioid use and employment rates did not differ due to pre-DARP legal status. However, it was found that addicts who were legally involved when they entered DARP treatment did have a significantly higher incarceration rate in year 12 (37 percent vs. 27 percent).

TABLE 3. *Twelve-year followup outcomes for clients grouped by pre-DARP legal status*

	With Pre-DARP Legal Status (Percent)	Without Pre-DARP Legal Status (Percent)
Any Opioid Use in Year 12	35	33
Daily Opioid Use in Year 12	25	20
Any Jail in Year 12	37	27
Employed for 6 Months in Year 12	46	47
Sample Sizes:	294	201

ADDICTION CAREERS

Longitudinal analyses of opioid use patterns over time illustrate the long-term threat of addiction relapse (Simpson and Marsh 1966). For instance, 65 percent of the DARP sample quit for a month or longer during the 12-year followup, only to relapse to daily opioid use one or more times. More encouraging, however, were the findings that 25 percent of these addicts never returned to daily opioid use over the 12-year followup period, and, by year 12, 63 percent had not used opioids daily for at least 3 years. As expected, longer periods of abstinence from opioid addiction were also associated with less legal involvement as well as with more employment in year 12.

The DARP treatment evaluation studies have consistently indicated that drug abuse treatment is effective in improving client post-treatment outcomes (Simpson and Sells 1962). Data from the 12-year followup interviews give further support to this conclusion, since 56 percent of the sample that had quit opioid use by year 12 reported being in a treatment program when they quit. A detailed treatment-history study of these addicts in the 12-year followup indicates the complexity of treatment experience when viewed from a longitudinal perspective (Marsh et al. 1965). The average length of time from the first to the last daily opioid use was 10.5 years. This period of time averaged 9 years for those who had quit before year 12, compared to

16 years for those who were still addicted. The average number of drug abuse treatment episodes per client was 6.2. As expected, addicts who were primarily treated in DT throughout their addiction career had the highest average, with 9.9 treatment episodes, compared to 5.1 for those usually treated in MM, 4.6 for TC, and 3.4 for DF.

Comparisons between these mutually exclusive groups classified by lifetime treatment experiences, however, showed that they were not significantly different in client sociodemographic characteristics (i.e., age, race, marital status, and educational levels), in reasons usually given for entering treatment (discussed later), and in drug use or criminal involvement in year 12. On the other hand, analysis of addicts according to whether they had ever been treated in each separate treatment modality (using partial regression weights) showed that those treated one or more times in a TC had the most favorable year 12 outcomes on drug use, alcohol use, employment, and time in jail (Marsh et al. 1985).

As part of the 12-year followup interview, DARP respondents were asked to review their lifetime of treatment experiences and to rate the overall importance of their reasons for entering treatment. Almost 9 out of 10 (89 percent) indicated that "deciding for self" was important (i.e., "very" or "somewhat" important) for entering treatment. Family was an important reason for 73 percent, but only 28 percent remembered friends as being important. Legal reasons were also considered important by about half the sample—49 percent acknowledged "legal problems" and 41 percent "probation or parole" (the four-point ratings of importance for these two items correlated at 0.62). A smaller percent indicated that drug availability or quality were important treatment motivations, that is, 32 percent for "poor quality of drugs" and 20 percent for "unavailability." Finally, only 16 percent said medical problems were important in making treatment decisions.

Legal and family incentives for treatment were also statistically associated with larger numbers of lifetime treatment episodes. For example, 50 percent of those who reported parole/probation as important treatment motivations had five or more treatments, while only 37 percent of those who reported parole/probation as being unimportant had as many treatments. Likewise, 48 percent of those who considered family reasons as important reported five or more treatment experiences, compared to only 26 percent of those for whom family reasons were unimportant. Thus, addicts who entered treatment more

frequently were subject to greater influence from legal pressures and family concerns.

In table 4, the data show that addicts who were originally admitted to DARP treatment with legal involvement also reported in year 12 that parole/probation and legal problems had previously been important treatment incentives. In addition, they were less likely to report "decisions for self" as being important. None of the other reasons for entering treatment were significantly related to pre-DARP legal status. The total number of career treatment episodes was also unrelated to pre-DARP legal status.

TABLE 4. *Important reasons for treatments for clients grouped by pre-DARP legal status*

	With Pre-DARP Legal Status (Percent)	Without Pre-DARP Legal Status (Percent)
"Parole/Probation" Was Important	53	29
"Legal Problems" Were Important	63	35
"Decided for Self" Was Important	84	95

Finally, analyses of relationships between reasons for entering treatment and year 12 outcomes revealed only two statistically significant findings. First, year 12 incarcerations in jail or prison for one or more months was more likely among those who rated probation or parole as important reasons for entering treatment (42 percent vs. 24 percent, $p<0.01$). Second, employment in year 12 (for 6 or more months) was less likely among addicts who reported medical or physical problems as important reasons for entering treatment (27 percent vs. 47 percent, $p<0.01$).

CONCLUSIONS

The DARP research team has been asked many times during the past 15 years if reasons for admission to treatment (sometimes characterized as "involuntary admissions," "legal referrals," or "civil commitments") are related to during-treatment behavior and to post-treatment outcomes. After several caveats, the answer has always been a cautious "No, we can't say they are!" These caveats emphasize that DARP samples and variables might not be generalizable to other situations. The study reported here focuses on a reduced sample of black and white male addicts who were examined at different points in time throughout a 12-year followup period.

The simple question posed was "Does the pretreatment legal status of addicts relate to length of stay in (DARP) treatment, to why they left treatment, and to their behavioral performance after treatment?" With few exceptions, pretreatment legal status did not predict subsequent outcomes. That is, within each separate treatment modality (MM, TC, DF, and DT), the length of time in treatment, reasons for discharge, and posttreatment outcomes were similar for addicts who were legally involved and those who were not. Exceptions usually involved outcome measures representing incarceration, which sometimes occurred as a direct consequence of the legal status (such as awaiting trial). However, there were some long-range associations of these criminality indicators that suggested habitual criminal involvement among some addicts.

Compared to more recent treatment populations, the DARP clientele was usually younger, more opiate-dependent, more legally involved, and had fewer prior treatment admissions (Hubbard et al. 1988). Especially significant is the fact that over 80 percent of the addicts admitted to DARP programs had one or more prior arrests, and over half had already spent time in jail or prison. Thus, legal status at the time of DARP admission may not have been a very discriminating variable in this relatively homogeneous sample of primarily young, inner-city, criminally active "street addicts." Source of referral was, therefore, examined in an extended effort to refine this definition of legal pressure. Of special interest were addicts referred by court or legal sources, which presumably carried more pressing legal implications. These clients were compared to those referred by family, friends, self, and others. The results, however, were no different from those using the original measure of legal status—in particular, DARP treatment retention for court-referrals was not significantly different from other referrals. Because these results were consistent

with others in this study focusing on legal status, these analyses were not elaborated. It is possible, however, that this measure could also have been too general or incomplete to reflect a high degree of pending legal liabilities.

In spite of the negative findings of this study, there are still unresolved questions about judicial pressures on treatment success. Clinical judgments vary on this point. As Indicated above, there is a lack of precision in the simple classification of "legal status." Indeed, legal status does not necessarily imply legal pressure; there are important methodological distinctions in comparing clients "with" and "without" legal status versus those who differ only in degree of legal pressure. Ideally, effects of legal pressures might be tested most appropriately using clients otherwise matched for criminal history and legal status, even though this is not easy to achieve in practice.

There is evidence from the DARP and other treatment evaluation studies that treatment is effective in improving behavioral outcomes. Treatment effects vary, however, and making accurate outcome predictions on the basis of pretreatment data is difficult. Staying longer in treatment tends to increase the chances for posttreatment success, but legal pressures at DARP treatment entry did not seem very important. More precise data concerning legal and other environmental incentives, as well as the client motivations and readiness for change, might help with these predictions, as suggested by De Leon and Jainchill (1986).

It is clear that future use of civil commitment will add more stress to the drug abuse treatment resources available in this country. It is, therefore, important to continue searching for ways to maximize treatment impact by identifying those most likely to benefit from various therapeutic efforts and then to define and improve the critical elements of treatment process and aftercare supervision.

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ACKNOWLEDGMENTS

This paper was supported by the National Institute on Drug Abuse Grant number R01 DA03419.

The contributions of Drs. S.B. Sells, George W. Joe, Wayne E.K. Lehman, and the National Opinion Research Center are acknowledged.

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Treatment Alternatives to Street Crime[1]

L. Foster Cook, Beth A. Weinman et al.[2]

INTRODUCTION

Treatment Alternatives to Street Crime (TASC) provides a bridge between the criminal justice system, which employs legal sanctions that reflect community concerns for public safety, and the treatment community, which emphasizes therapeutic relationships as a means for changing individual behavior and reducing substance abuse and other problems. Under TASC auspices, community-based treatment is made available to drug-dependent individuals who would otherwise become involved with the criminal justice system.

TASC programs were initiated nearly 15 years ago in response to recognized links between substance abuse and criminal behavior. The mission of TASC is to participate in criminal justice processing, as early in the continuum as acceptable to participating agencies. TASC identifies, assesses, and refers appropriate drug- and/or alcohol-dependent offenders accused *or* convicted of nonviolent crimes to community-based substance abuse treatment, as an alternative or supplement to existing criminal justice sanctions and procedures. TASC then monitors the drug-dependent offender's or client's compliance with individually tailored progress expectations for abstinence, employment, and improved social/personal functioning. TASC then takes responsibility for reporting treatment results back to the referring justice system component. Clients who do not follow or who violate conditions of their criminal justice mandate, TASC, or treatment agreement are usually returned to the criminal justice system for continued processing or for sanctions.

THE TASC MODEL

TASC combines the influence of legal sanctions for probable or proven crimes with the appeal of such innovative dispositions as deferred prosecution, creative community sentencing, diversion, pretrial intervention, probation, and parole supervision: the goal is to motivate treatment cooperation by the substance abuser. Through treatment referral and closely supervised community reintegration, TASC aims to permanently interrupt the vicious cycle of addiction, criminality, arrest, prosecution, conviction, incarceration, release, readdiction, criminality, and rearrest.

TASC programs encourage participants to improve their lifestyles while retaining important community ties. TASC programs also provide important incentives to other criminal justice and treatment participants. TASC can reduce costs and relieve many substance abuse-related processing burdens within the justice system through assistance with such responsibilities as addiction-related medical situations, pretrial screening, and posttrial supervision. The treatment community also benefits from TASC's legal focus, which motivates and prolongs clients' treatment cooperation and ensures clear definition and observation of criteria for treatment dismissal or completion. Public safety is also increased through TASC's careful supervision of criminally involved clients during their community-based treatment.

In 1962, a landmark Supreme Court decision, Robinson v. California, defined chemical addiction as an illness rather than a crime. It also held that the State could force an addict to submit to treatment and could impose criminal sanctions for failure to comply with the treatment program. In the context of the times, when penal coercion was disavowed as an effective rehabilitation incentive and community-based treatment for substance abuse was only slowly gaining acceptability and credibility, alternatives to routine criminal justice system processing for drug-dependent offenders were initiated.

In the years following, several conceptual and strategic models were developed to implement these new understandings. By the early 1970s a Presidential-appointed Special Study Commission on Drugs established a definite link between drugs, particularly narcotics, and crime. A small number of addicts were found to be responsible for a large percentage of crimes, and a disproportionate share of criminal justice system resources were being absorbed by their recidivism. Discussions on how to link treatment with the judicial process and

how to interrupt the relationship between drugs and property crimes took place among the Law Enforcement Assistance Administration (LEAA), the Special Action Office for Drug Abuse Prevention (SAODAP), and the National Institute of Mental Health's Division of Narcotic Addiction and Drug Abuse (DNADA)-predecessor to the National Institute on Drug Abuse (NIDA). The resulting Federal initiative, modeled after earlier experiments with diversion programs and two demonstration projects in New York City and Washington, DC, was funded by the Drug Abuse Office and Treatment Act of 1972, and named TASC. The first TASC project opened in Wilmington, DE, in August of that year, and provided pretrial diversion for opiate addicts with nonviolent criminal charges who were identified in the jail lockup by urine tests and interviews. After assessment of their treatment suitability and needs, arrestees who volunteered for TASC were referred and escorted to appropriate community-based treatment and monitored for continued compliance with treatment requirements. Successful completion usually resulted in dismissed charges.

LEAA issued program guidelines for replication of the TASC model, which focused on pretrial diversion and sentencing alternatives for drug-dependent offenders, and awarded "seed" grants, with the understanding that successful demonstration projects would gain local or State funding to continue the programs within a 3-year period. In 1972 to 1973, 13 TASC projects were initiated by local jurisdictions in 11 States. By 1975, 19 more such projects had started, making a total of 29 operational sites in 24 states. Before Federal funding was withdrawn in 1982, TASC projects were developed at 130 sites in 39 states and Puerto Rico. TASC is currently operational in 18 states. Many of these local programs also continued communications with each other through a National TASC Consortium, which was reestablished in 1984.

LEAA made a special effort to fund TASC programs in a variety of geographic areas and jurisdictions, including large metropolitan areas, smaller cities, suburban and rural counties, regional conglomerations, and statewide networks of sites. Original client participation criteria were also expanded to include polydrug and alcohol abusers; juveniles; and, in some places, domestic violence and mental health demonstration projects. TASC services to the alcohol- and drug-related traffic offender were also evolving.

EVALUATION OF TASC PROGRAMS

All of the TASC programs funded by LEAA were required to conduct independent evaluations. More than 40 of these local assessments were completed over the 10-year period from 1972 to 1982. Although a few evaluators found some TASC programs had overly optimistic expectations for client success or were underutilized, the majority concluded that local TASCs effectively:

- intervened with clients to reduce drug abuse and criminal activity;
- linked the criminal justice and treatment systems; and
- identified previously untreated drug-dependent offenders.

During the same period, three national assessments of the TASC program focused on the success of multiple sites in meeting general TASC goals. Evaluators of five early TASC projects (System Sciences, Inc. 1974) concluded that those sites included a substantial proportion of repeat offenders with long histories of addiction, initiated more than half of the identified clients (55 percent) into their first treatment experience, and reduced criminal recidivism.

A 1976 study of 22 operational TASC sites (Lazar Institute 1976) found several commonalities in the success of TASC programming, which included: (1) the broad-based support of the justice system gained by TASC; and (2) the support of the treatment system, because TASC's legally sanctioned referral mechanisms to treatment were more effective than informal treatment initiations. TASC's monitoring function improved clients' treatment performance, and TASC involvement seemed to reduce rearrest rates. Only 8 percent of clients in all sites were known to have been rearrested for new offenses while in the TASC program. However, TASC had no solid data base or data collection mechanism in place that would allow for long-term evaluation and comparison of the program's impact on drug-related crime or on the processing burdens of the justice system.

A subsequent evaluation of 12 TASC sites (System Sciences, Inc. 1978) found that:

- the TASC model offered a beneficial and cost-effective alternative to the criminal justice system for drug-abusing offenders;

- its major functions and procedures were effective;
- a majority of clients were admitted to TASC prior to trial;
- TASC's threat of legal sanctions added a positive factor to the treatment process;
- TASC projects achieved remarkably progressive success rates with clients (considering the seriousness of the crimes and the drugs involved); and
- staff quality was more important to program success than were organizational and other factors.

Poor recordkeeping and information management, however, were widespread among TASC programs.

A report from the National Institute on Drug Abuse's Treatment Outcome Prospective Study (TOPS) (Collins and Allison 1983) examined the impact of TASC or similar programs for drug-dependent offenders on clients' intreatment and posttreatment behavior. This study compared criminal justice-involved clients (in TASC and under other justice system supervision) with voluntary controls on demographic characteristics, treatment retention, treatment progress, and predatory behaviors in the year following treatment termination. The findings were that criminal justice-referred clients were more likely to be male, nonwhite, and younger and to have had previous justice system involvement in the year before treatment than their volunteer counterparts. More important, TASC clients improved as much with regard to drug use, employment, and criminal behavior as other clients during the first 6 months of treatment. TASC clients under legal coercion also tended to remain in both residential and outpatient drug-free treatment modalities 6 to 7 weeks longer than other criminal justice-referred or voluntary clients—a finding usually associated with better treatment outcomes. The monitoring/case management function of TASC seemed to encourage this longer treatment participation. However, predatory crime and arrest before treatment were still the most consistent predictors of criminal reinvolvement, as measured by arrest records and self-reports in the first posttreatment year.

SUMMARY

These studies point to TASC's success and effectiveness in programming through specific critical program elements. The specific program elements shown to be successful through various studies were: the establishment of the broad-based support by the criminal justice and treatment systems; the use of an offender eligibility criteria that assists in the early identification, assessment, and referral of the previously unidentified drug-dependent offender, and a comprehensive monitoring or case management system that holds the client accountable and has proven to reduce client rearrest rates and improve the treatment performance of the drug-dependent offender. Conversely, these studies have also shown that the lack of data collection and evaluation has hindered TASC programming.

FOOTNOTES

1. This is an abridged version of the *TASC Program Brief* published by the Bureau of Justice Assistance, Office of Justice Programs, U.S. Department of Justice, 1985. (The *TASC Program Brief* is available directly from the Bureau of Justice Assistance or the National Association of State Alcohol and Drug Abuse Directors.)

2. Over 300 authors from the National Association of State and Drug Abuse Directors and the Bureau of Justice Assistance contributed to this chapter.

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ACKNOWLEDGMENTS

This work was supported by the TASC training and technical assistance Grant number 86-FA-CX-K026 from the Bureau of Justice Assistance, Office of Justice Programs, U.S. Department of Justice.

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The Criminal Justice System and Opiate Addiction: A Historical Perspective

Herman Joseph

INTRODUCTION

Within the past 30 years, agencies affiliated with the criminal justice system in New York City developed various programs to assist arrested narcotic addicts. The existence of these programs offers more than a historical record of attempts to solve a seemingly intractable problem. Historical experiences and available research findings can provide guidelines for future planning.

In New York City, persons convicted of misdemeanors or felonies may be sentenced to probation as an alternative incarceration. They are supervised in the community by a probation officer and must adhere to orders of probation approved by the sentencing judge (i.e., obtain employment and contact the probation officer as directed). Parole is similar except that individuals have served time in prison and are released to the community under the supervision of a parole officer for the remainder of their sentences. Parolees must adhere to conditions similar to the orders of probation, but mandated by the New York State Board of Parole.

During the period of 1956 through 1965, the New York State Division of Parole and the New York City Office of Probation established narcotics units with specially trained officers to supervise convicted narcotic addicts. It was assumed that the authority of the court, coupled with the intensive supervision and guidance of a trained probation or parole officer, would be sufficient to assist addicts to abstain from drugs, become employed, and lead crime-free lives. Research from both agencies, however, showed the majority of addicts supervised in these programs were unable to make acceptable adjustments in the community (Joseph and Dole 1970).

The Narcotic Offender Unit of the New York State Division of Parole was established in 1956 for the purpose of supervising addicted parolees (Diskind and Klonsky 1964). Of the 673 parolees who were placed on parole in this unit between November 1, 1956, and December 31, 1961, 27 percent either completed parole successfully or were considered to be in good standing. The remaining 73 percent either relapsed to the use of drugs, were rearrested, or were reinstitutionalized on parole violations. A postparole followup study of 66 successfully terminated cases showed that after parole 30 individuals were known to have relapsed and 34 amassed 99 rearrests. The postparole study was undertaken approximately 2 years and 9 months following the successful termination of the 66 parole cases. Therefore, about 80 percent of the 673 parolees were unable to adjust in the community during parole and the immediate postparole period. The unit was terminated in 1961.

From 1963 through 1965, the New York City Office of Probation and the Washington Heights Rehabilitation Center, a now-closed public health agency that treated addicts, created a program to treat addicted probationers (Brill and Lieberman 1969). A team comprising probation officers, public health nurses, and social workers worked with selected probationers. A drug-free counseling approach was employed by the staff. Urine testing was administered to probationers participating in the program by their supervising probation officers in the men's room of the probation office or at the time of home visits. The tests were analyzed by the Department of Health's laboratory. If urine tests were administered on field visits, the specimens were delivered by the probation officers to local drug stores, which were designated as pick-up stations for the Department of Health.

During the first year of treatment, about 78 percent of the 159 probationers reverted to heroin use in varying degrees, about 48 percent were rearrested, and 25 percent were convicted. Although a group of probationers did achieve abstinence from opiates for 45 percent of the time they were enrolled in the program, about 50 percent of the probationers had used heroin in varying degrees during any given treatment month. In general, the rate of relapse paralleled the unsuccessful efforts of the New York Riverside Hospital to rehabilitate addicts (Brill and Lieberman 1969). In summation, the overwhelming majority of the probationers who participated in this program were unable to achieve the goals of drug abstinence, employment, and a law-abiding life. As with all programs, however, there are success stories: the current Director of the New York State Division of

Substance Abuse Services, Julio Martinez, was a probationer in this program for about 3 years.

In 1963, the probation office of the Kings County Supreme Court established Daytop Lodge, later known as Daytop Village, a drug-free therapeutic community. Unfortunately, there are no followup studies that would document the subsequent adjustments of the residents and probationers who entered and left treatment at that time. However, several narcotic addicts who entered Daytop during its formative years subsequently became leaders in the therapeutic community movement.

PROBATION CLINICS

As abstention programs appeared to fail for the majority of the addicted parolees and probationers in the 1950s and the 1960s, other methods of treatment had to be considered. The New York City Probation Methadone Program was established in response to a need for methadone maintenance treatment in New York City. In 1970, addicts who applied for methadone maintenance had to watt from 8 to 12 months before being accepted for treatment. The Probation Department was unable to obtain adequate medical treatment for addicted probationers from community sources and, therefore, under the direction of this writer, developed its own methadone maintenance program.

From 1970 to 1973, the New York City Office of Probation operated five methadone maintenance clinics in Manhattan, the Bronx, Queens, and Brooklyn (Joseph 1973). Medical institutions that cooperated with Probation in this program were the Beth Israel Medical Center, the Psychiatric Clinic of the Courts of New York City, the methadone program of the Albert Einstein College of Medicine, and the New York City Health Services Agency.

Four of the clinics were located within Probation offices. Medication counters and examination rooms were set up and all aspects of methadone treatment were carried out in the probation office: intake interviews, physical examinations, stabilization on methadone, ongoing treatment, administration of urine tests, counseling, and methadone detoxification. However, the Manhattan Beth Israel Probation Unit was housed in a satellite hospital clinic with two psychiatrists from the Psychiatric Clinic of the Courts of New York serving as clinic doctors. In all clinics, probation officers functioned as counselors. The medical institutions provided doctors, nurses, medication, physical examinations, and addiction specialists. The latter were successful

methadone patients who assisted the professional staff with counseling of clinic patients.

The program was open to addicted probationers over 18 years of age with an addiction history of 2 or more years. In the 3 years of operation, close to 1,000 addicted probationers were treated in five probation clinics. About 18 percent of these patients were terminated because they failed to cooperate with program regulations, continued drug abuse, were incarcerated following conviction or rearrest, or requested voluntary detoxification. Patients wishing to continue treatment after completing probation were transferred to methadone units operated by hospitals and physicians (Joseph 1973).

Unemployment was a major problem in the Probation Methadone Program. In November 1972, approximately 53 percent of the active patients were unemployed, 33 percent were working, 7 percent were in school or training, and 7 percent were homemakers. Most of the probationers were high school dropouts with an estimated fifth-grade reading level. They were unable to compete in a job market that was changing from manufacturing to service and that demanded specific technical skills as well as advanced education. Referrals were made with varying degrees of success to community agencies for job placement. Eventually, it was necessary to obtain a governmental grant with the Federation Employment and Guidance Service of New York City to counsel, educate, and locate jobs for patients in the Bronx Probation Clinic. This clinic served a particularly disadvantaged Hispanic and black probation population between the ages of 18 and 30. This particular program was in operation for about 4 years but was discontinued due to cutbacks in funding.

Unemployment appeared to be related to the arrest rate. During 34 months of operation, 94 patients (10.4 percent of the first 900 admissions) were rearrested while in treatment. Approximately 77 percent of the rearrested probationers were unemployed, as compared to an overall unemployment rate of 53 percent for the program. Of the rearrested group, about 23 percent had jobs.

The New York City Probation Methadone Program's policy was to administer daily methadone doses of 80 to 100 mg. At this level, the tolerance to methadone diminishes or eliminates the euphoric effects of heroin, relieves the yen or physical craving to compulsively use heroin, and protects patients from overdose reactions if large amounts of illegal or unprescribed opiates are ingested. Also, at 80 to 100 mg per day, patients develop tolerance to the tranquilizing, euphoric, and

narcotizing properties of methadone. Thus, the patient is potentially able to function in conventional society without incapacitating narcotic effects. When methadone maintenance is correctly prescribed, the medication acts as a normalizer rather than a narcotic.

In 1973, methadone treatment became available citywide without a long waiting period for admission. The probation clinics were eventually phased out, and patients were transferred to methadone treatment near their homes or jobs.

MANHATTAN PROBATION OFFICE

The office of Probation in Manhattan operated two methadone clinics: one was a satellite clinic of Beth Israel Medical Center and the other, located in the Probation Office, was operated in conjunction with the New York City Health Services Administration. A survey administered by this writer to 1,414 misdemeanor probation cases active at the Manhattan Probation Office during the first 2 weeks of March 1973 identified current use of heroin and treatment-status referrals. Use of heroin was verified by urine tests, the probationer's reports, and official records. Approximately 83 percent of the 1,414 cases surveyed were known to have had histories of heroin abuse. The probationers, at the time of the survey, were all over the age of 18. The majority (57 percent) were enrolled in methadone maintenance treatment with the probation department program or with other agencies (see table 1). However, methadone maintenance was not the only treatment of choice: probationers were referred to therapeutic communities as well as to other drug-free programs. Also, a small percentage of probationers appeared to abstain from heroin for unknown periods of time, without treatment. Those probationers who were known to be using heroin were referred to treatment. In summation, 85 percent of the probationers who had known histories of heroin abuse were either in methadone treatment, in drug-free programs, or appeared to be abstaining without treatment.

COURT DIVERSION AND PRISON PROGRAMS

Another type of program diverted addicts from the criminal justice system to treatment programs within the community. In the early 1970s, the New York City Commissioner of Corrections, Benjamin Malcolm, asked Dr. Vincent P. Dole of The Rockefeller University to set up a medical unit in the New York City jails to detoxify heroin addicts. In 1974, the Montefiore Medical Center in the Bronx assumed responsibility for the Department of Correction's detoxification

TABLE 1. *Treatment status of addicted probationers in Manhattan*

Status	Number	Percent
Probation Methadone Clinics	225	26
Other Methadone Clinics	274	31
Drug-Free Programs	126	14
Abstain No Program	124	14
Using No Program	66	7
Questionable Use	17	2
Bench Warrant Status	40	5
Jail	14	1
Total	886	100

program and established wards at the correctional facility on Rikers Island. The program is still in operation and has been expanded to include the initial stages of long-term methadone treatment. Between 1985 and 1986, there were 15,828 admissions to this opiate detoxification program (New York State Division of Substance Abuse Services 1986).

As a result of his experiences working within the jails, Dr. Dole originated the idea of screening incarcerated addicts for treatment in the community. Arrangements were made with the judges and community methadone programs to enroll arrested addicts in outpatient treatment. The idea proved to be so successful that the now defunct New York City Addiction Services Agency received a grant in 1972 from the Federal Law Enforcement Assistance Administration to develop the first Court Referral Project.

Arrested addicts were then diverted from the court system to treatment. Referrals were made to outpatient drug-free programs, therapeutic communities, methadone maintenance, and the commitment facilities of the New York State Drug Abuse Control Commission. Retention data for 12 months in treatment for the years 1973 and 1974 showed methadone programs retained between 50 percent and 60 percent of those diverted to treatment; therapeutic communities, between 12 percent and 18 percent; and ambulatory drug-free programs, between 12 percent and 32 percent (figures 1, 2, and 3) (Addiction Services Agency 1974). The commitment facilities discharged their referrals at various points in time from lockup centers.

Therefore, the retention rate did not reflect voluntary behavior. In 1978, the State of New York assumed financial responsibility for the treatment of drug addicts, and the Court Referral Project was subsequently terminated.

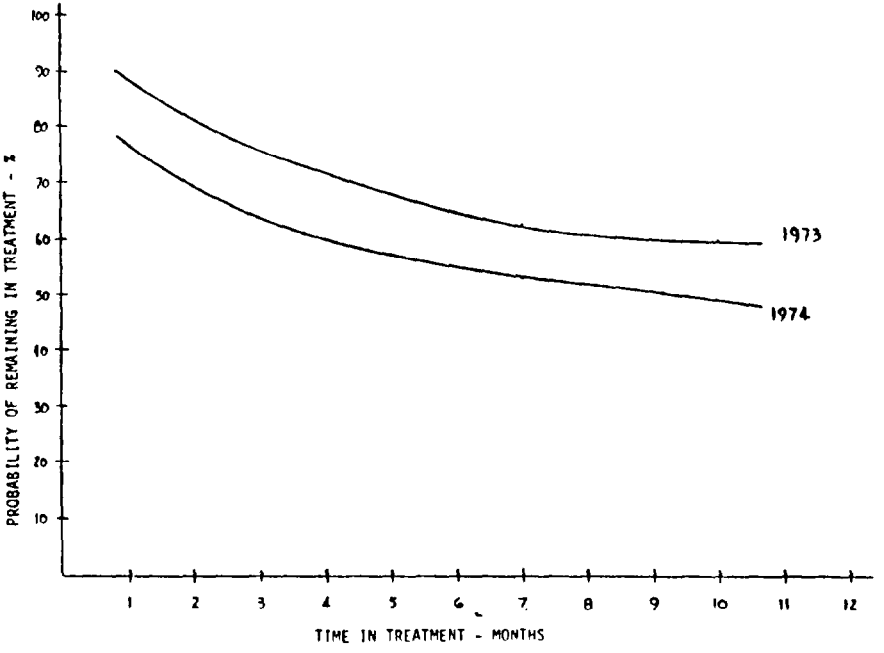

FIGURE 1. *Methadone maintenance-clients placed in 1973 and 1974*

SOURCE: 1974 Report of the Court Referral Project of the New York City Addiction Services Agency.

In 1974, after the closing of the probation clinics, the current State agency, now known as the Division of Substance Abuse Services (DSAS), in conjunction with the New York City Office of Probation and the New York State Court System, developed a referral service to community programs for addicted probationers. This was the Multi-Purpose Outreach Program. Units were initially set up in probation offices in New York City. By 1978, almost 50,000 persons known to the courts and probation were interviewed throughout New York State and about 30,000 were referred to treatment. This program, involving a staff of over 100 workers, was phased out because of budget considerations in 1978. Today a small unit works in the New York

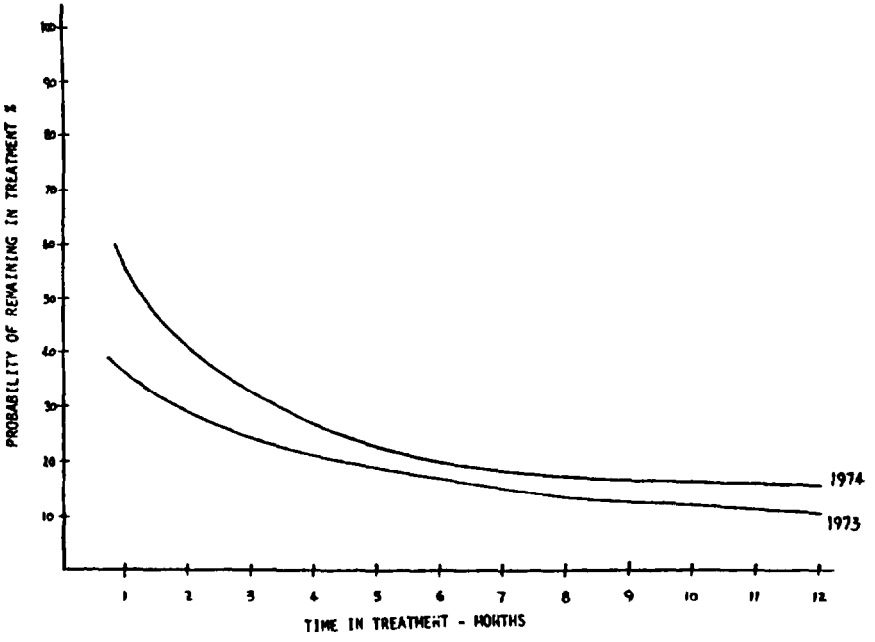

FIGURE 2. *Therapeutic communities—clients placed in 1973 and 1974*

SOURCE: 1974 Report of the Court Referral Project of the New York Cty Addiction Services Agency.

City courts and probation offices; however, in 1986 State workers were assigned to the New York State Parole Office in Manhattan to interview, evaluate, and refer drug-abusing parolees to community-treatment facilities. This program, known as ACCESS, is based on procedures and concepts developed in the Multi-Purpose Outreach Program and will soon be expanded.

About 10 years ago, the "Stay'N Out" program was implemented at the Arthur Kill Correctional Facility on Staten Island under the direction of Mr. Ron Williams. This program utilizes the model and concepts of a therapeutic community, Phoenix House, to assist prisoners in resolving substance abuse and personal problems that lead to relapse and criminal activities. The program is operated by the New York State Department of Corrections and the New York Therapeutic Communities and is evaluated through a National Institute on Drug Abuse grant by Narcotic and Drug Research, Inc. The "Stay'N Out" program is hierarchical in structure—namely, the resident

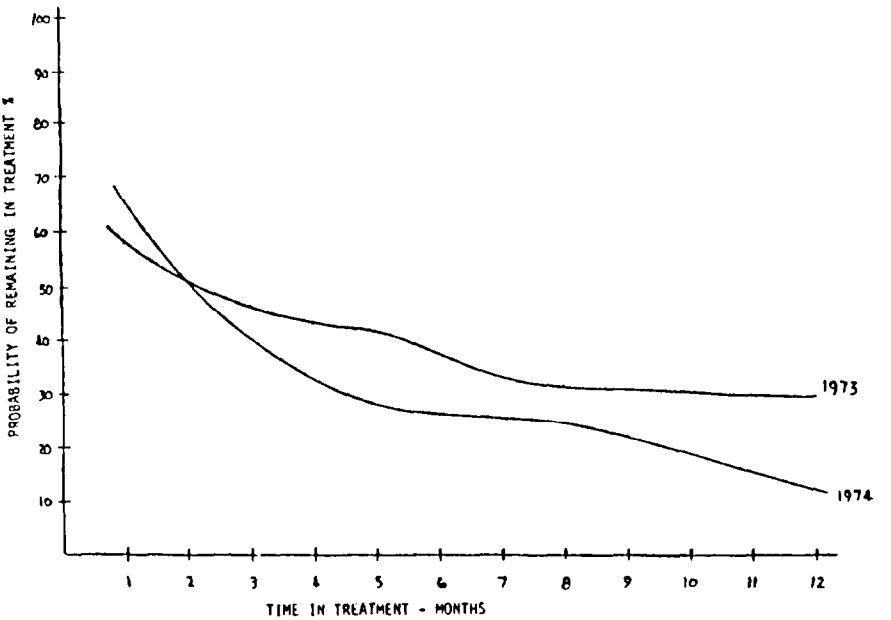

FIGURE 3. *Ambulatory drug-free programs—clients placed in 1973 and 1974*

SOURCE: 1974 Report of the Court Referral Project of the New York City Addiction Services Agency.

assumes greater responsibility within the program as improvements in outlook and behavior become evident. Techniques to foster change include individual counseling, encounter groups, and seminars. Upon release from prison, parolees are encouraged to seek further treatment in therapeutic communities. The results show that for those who participated in the prison program from 9 months to 1 year, there were lower recidivism rates and a higher proportion of positive discharges from parole when compared to the parole outcomes of participants in other drug-free-oriented counseling methods available in prisons (Wexler et al. 1985).

Another example of a diversion project was developed in 1986 and 1987 by Charles Laporte, Assistant Director of the New York State Division of Substance Abuse Services and Director of the agency's Bureau of Chemotherapy Services. This program, known as KEEP (Key Extended Entry Process), was implemented to facilitate the

entry of untreated heroin addicts into long-term treatment. Patients are recruited from three major sources: walk-in applicants from the streets who come to methadone programs in search of treatment; the waiting list for methadone maintenance programs; and inmates incarcerated at the New York Correctional Facility at Rikers Island. Patients who enter the KEEP program are initially stabilized on methadone and placed on a detoxification schedule of up to 180 days. During this period, patients are evaluated for placement in an appropriate long-term program—methadone maintenance, therapeutic communities, etc. A decision about the patient's long-term treatment placement is based on the results of a medical examination; the duration of the patient's addiction; the patient's preferences; and an evaluation of the patient's adjustment, behavior, and needs.

KEEP programs in the community are affiliated with methadone treatment programs. Most patients enrolled in methadone treatment either curtail or stop criminal activities and their use of needles for the injection of illicit drugs. Therefore, it is anticipated that problems associated with addiction—criminality and the spread of infectious diseases such as acquired immunodeficiency syndrome (AIDS) or hepatitis—may be reduced or brought under some control with the implementation of this program.

Patients recruited for KEEP from the detoxification wards at Rikers Island are voluntarily maintained on either 30 or 40 mg per day of methadone while in jail. This phase of the program is known as Pre-KEEP, and was initially developed by Mr. Laporte's staff in the different correctional facilities located on Riker's Island. The Montefiore Medical Center in the Bronx, which operates the detoxification service for the New York City Department of Corrections, currently administers the medical and referral aspects of the KEEP program. Inmates are on methadone when discharged to the community and are instructed to report to specific community KEEP methadone programs within 24 hours. The goals, therefore, of the Rikers Island program are to prevent inmate relapse to drug abuse upon release from the correctional facility; to reduce criminal recidivism; to limit the spread of infectious disease, namely AIDS; and to initiate long-term treatment. These goals are accomplished by linking the methadone treatment received at Rikers Island to the methadone treatment received in the community program. Preliminary program results are encouraging. Notwithstanding serious problems related to unemployment and homelessness, over 70 percent of the inmates reported to the programs when released.

A diversion program was developed by ADAPT (Association for Drug Abuse Prevention and Treatment) in 1986 to serve AIDS and AIDS-related complex (ARC) patients at Rikers Island. Originally formed in the late 1970s to merge the varying philosophies and approaches to drug treatment, ADAPT was reconstituted as a voluntary organization in 1985 to educate drug abusers about AIDS and to develop programs to meet the AIDS epidemic. The organization, under the leadership of its president, Yolanda Serrano, a counselor in a methadone clinic, consists of persons employed in drug-treatment programs, recovered and recovering addicts, health-care professionals, and other interested parties.

Within the past year, ADAPT interviewed about 100 patients on the Rikers Island Hospital AIDS ward. Patients were helped with legal problems, family matters, grievances concerning conditions on the ward, and, upon their release from jail, were referred for medical treatment and social services. ADAPT is developing models for the delivery of services to AIDS and ARC patients with addiction histories. These models can be adopted by other cities and countries. As of this writing, an ADAPT branch in Australia is being organized based on the experiences and programs developed by the New York City ADAPT (Serrano, personal communication 1987).

There are controversies concerning the effectiveness of civil commitment. The New York State Civil Commitment Program operated from 1987 to 1979. The program was discontinued because it was not cost effective, there were problems concerning the civil liberties of those committed, and there were high relapse rates in the predominantly drug-free outpatient components of the programs. In 1989, at a hearing before senate and assembly committees of the state legislature, former Commissioner Pierce indicated that approximately 56 percent of the 1,893 persons known to the New York State Civil Commitment Aftercare Division for a 21-month period either absconded or relapsed. The rest (44 percent) were being supervised and appeared to be abstaining from drugs for Unspecified periods of time (New York State Legislative Hearings 1969).

The California Civil Addict Program is still operating, but in a modified and reduced form, because judges have been reluctant to use civil commitment. Furthermore, findings from studies in the 1960s differ from the results of recent long-term followup studies. For example, of 456 persons known to the outpatient parole division of the California Civil Addict Program in the 1960s, 16 percent remained in good standing for 3 years; 81 percent either absconded, relapsed,

or were recommitted or rearrested; and 3 percent were removed from the program either by a writ of habeas corpus or by death (Kramer et al. 1968). These findings are in contrast to the long-term results of civil commitment described by Anglin (this volume). It appears that individuals who were supervised in the aftercare parole division of the California program, When reinterviewed between 11 and 13 years after commitment, showed reductions in daily drug use and Criminal activity. These results were found in three groups: active users, minimal users prior to commitment, and those maintained on methadone. Anglin (this volume) has reported that urine testing, while an addict was under supervision to the parole division, was a significant factor in these outcomes. However, alcohol problems appear to be developing within the abstinent group (Anglin, this volume; Anglin, personal communication 1987).

THE EFFECT OF LARGE SCALE METHADONE PROGRAMS ON CRIME AND HEALTH STATISTICS

In New York City during the years 1971 through 1973, there was an increase in the methadone census of about 19,900 cases, bringing the number of patients in methadone treatment to over 34,000. Within the same period there were dramatic decreases in the number of drug arrests (-24,900) and complaints to the police department for crimes usually associated with addiction—burglary, robbery, and grand larceny (-77,000) (figure 4). Similar results were evident in 1976 When methadone maintenance was introduced on a large scale in Hong Kong. Approximately 8,000 addicts were admitted to a network of citywide clinics. For the period 1976 through 1980, there was a sharp decline in the number of addicts admitted to prisons in Hong Kong for drug offenses and other crimes (figure 5). Despite differences in culture and the periods of time involved, the phenomenon of reduction in addict-related crime was evident in Hong Kong and New York City when large-scale methadone treatment was implemented. Also, in New York City during the period 1971 to 1973, there was a substantial decrease in the number of reported cases of serum hepatitis (-1,500) (figure 6) (Dole et al. 1981).

In a 1974 to 1976 followup study of over 1,500 active and discharged methadone patients, Dr. Dole and this writer reported that arrest rates were dramatically reduced after entry into methadone treatment. There was a 60 percent decrease in arrest rates for patients who remained in treatment for less than 1 year and an 63 percent decrease for patients who remained in treatment for over 1 year. However, it should be noted that patients who left during the first

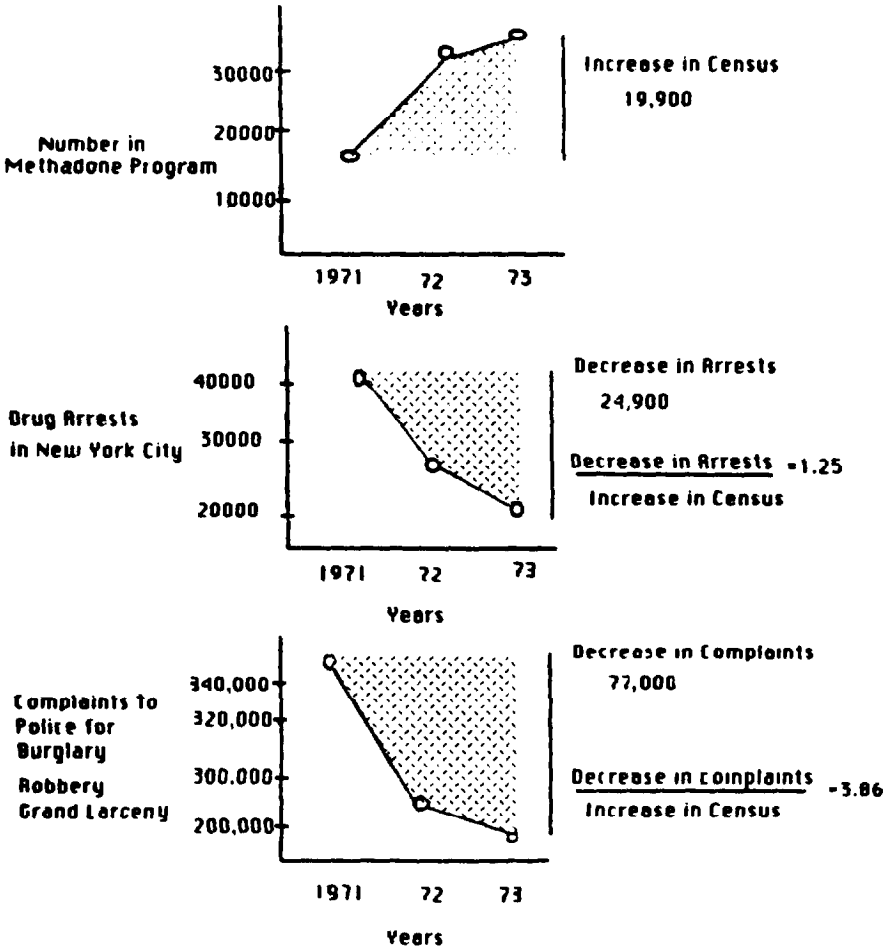

FIGURE 4. *Relation between increase in number of addicts treated in methadone clinics and reduction in criminal activity in New York City*

NOTE: Data from New York City Police Department.

year of treatment had higher pretreatment arrest rates than those who remained in treatment for longer periods (Dole et al. 1981) (figure 7).

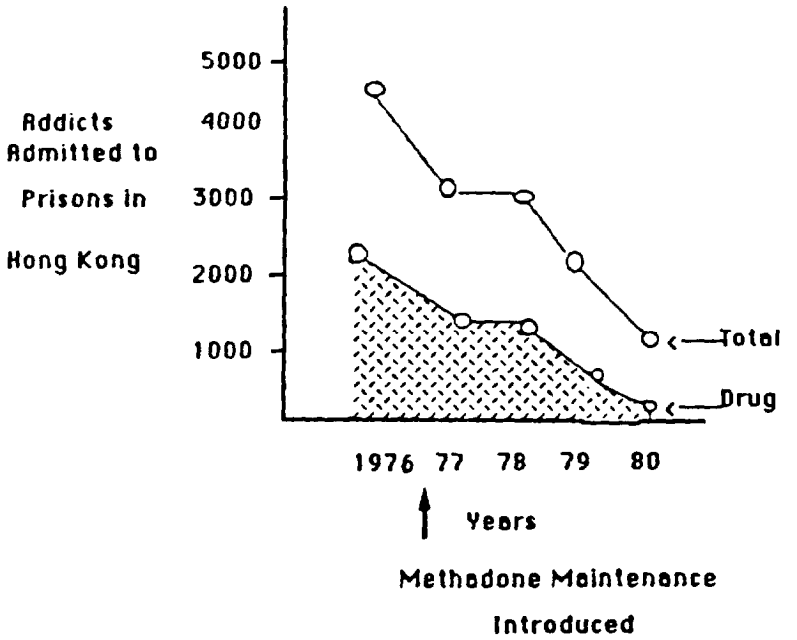

FIGURE 5. *Reduction in number of narcotic addicts entering prison in Hong Kong since introduction of methadone maintenance program.*

NOTE: Data provided by Peter E.I. Lee, Commissioner for Narcotics, Hong Kong.

Analysis of stored blood samples in New York City revealed the presence of human immunodeficiency virus (HIV) antibodies in samples from as far back as 1978. In 1984, 163 male heterosexual methadone maintenance patients were tested for the presence of HIV antibodies. For the 68 patients who entered continuous treatment prior to 1977, 31 percent tested seropositive, as compared to 51 percent of the 95 seropositive patients who entered continuous treatment after January 1, 1977. However, in another study, about 10 percent of 35 patients enrolled in methadone treatment prior to 1978 tested seropositive. Patients with positive reactions had continued intravenous drug abuse while in treatment. In contrast to this finding, about 58 percent of 88 intravenous drug users studied in New York City were found to be seropositive (Novick et al. 1986; Novick, personal communication 1987). Also, a recent study of risk behaviors that can result in the transmission of the AIDS virus by methadone patients found that both the frequency of drug injection and the frequency of injection in

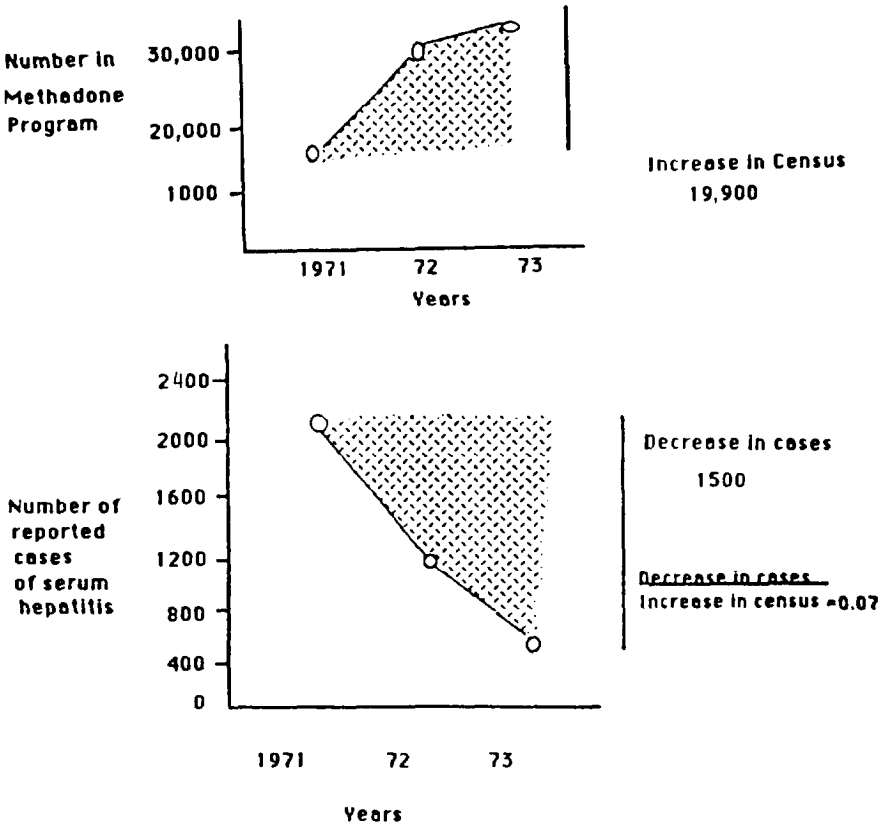

FIGURE 6. *Relation between increase in number of addicts treated in methadone clinics and reduction in serum hepatitis*

NOTE: Data on hepatitis from Health, Education, and Welfare and New York State and City Departments of Health.

shooting galleries are significantly reduced over time (Abdul-Quader et al. 1987). It appears, therefore, that prompt entry into methadone maintenance treatment may play an important role in helping to reduce the spread of the AIDS virus. Since methadone is orally administered, most patients will eventually curtail or eliminate use of needles. Therefore, over time, the majority of patients in methadone treatment should be removed from, or participate less frequently in, the network of transmitting AIDS through the use of shared needles, syringes, and cookers.

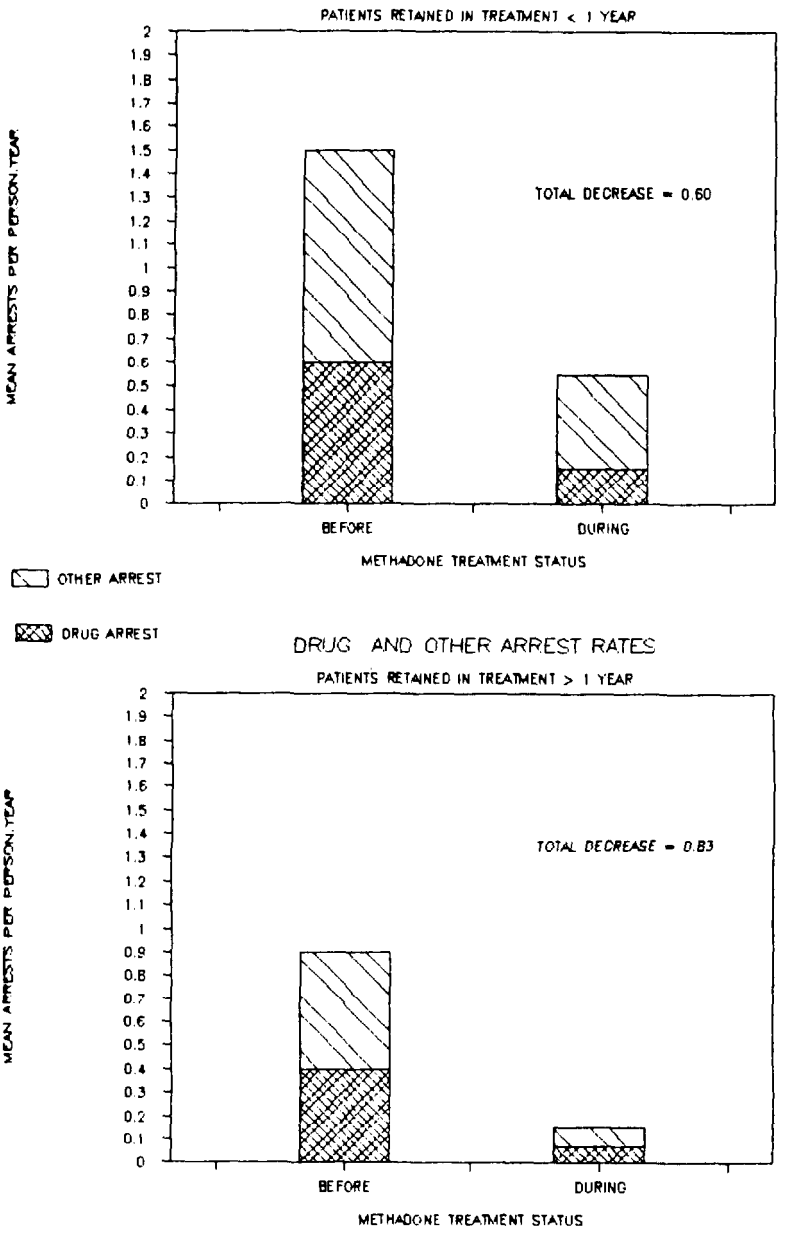

FIGURE 7. *Drug and other arrest rates*

DISCUSSION

Available historical studies of the 1950s, 1960s, and 1970s in New York City show that methadone maintenance may be the most cost-effective outpatient treatment for the majority of arrested opiate addicts under probation and parole supervision who remain in the community and do not enter residential facilities. These early studies show that addicted probationers who stay in methadone treatment have lower arrest rates and remain in treatment longer than convicted addicts who are supervised in special narcotics units without chemotherapy. However, methadone maintenance should not be the only method of treatment available, since some opiate addicts respond to a variety of drug-free approaches, including residential treatment as well as individual and group therapy. Ideally, a choice of treatment methods should be available to probationers and parolees with the provision that programs undergo evaluation and monitoring to determine cost-effective treatment approaches.

Many patients maintained on methadone have serious cocaine and alcohol problems. Programs that use therapeutic community, Alcoholics Anonymous, or Narcotics Anonymous approaches and that would also allow patients or residents to remain on methadone should be implemented and evaluated. One such program developed in New York City by Charles LaPorte is called Short Stay. This therapeutic community permits methadone patients to receive their prescribed dose of methadone while resolving behavior, alcohol, and nonopiate chemical-dependency problems. After a period of treatment from 3 to 6 months, residents are transferred back to their methadone programs for continued treatment.

Addicts should not be coerced into a particular type of treatment. A general condition of probation or parole to enter drug treatment is more suitable than a condition to enter a specific therapeutic community or methadone maintenance program. The authority and judgment of the physician would be compromised if a judge or parole panel ordered methadone treatment. Thus, with a general order of probation or parole, addicts and their supervising officers have a certain amount of flexibility and leeway. In other words, if one program does not work for the probationer or parolee, another type of treatment can be used without jeopardizing the probationer's or parolee's legal standing. Rigid conditions of probation or parole specifying treatment may further disrupt lives and exacerbate the social problems that these agencies address. Court authorities should recognize that methadone maintenance can help reduce crime that is related to

drug abuse, but it cannot eliminate crimes, committed by patients, that may be related to homelessness, poverty, and unemployment.

There has been concern in some quarters about the "moral issues" of high-dose methadone and the duration of methadone treatment. For hard-core addicts, high-dose methadone (80 to 100 mg/day) may be more beneficial, especially during the first few years of treatment. A goal of the former probation clinics in New York City was to help convicted addicts obtain education and employment and desist from street activities related to drug abuse. Low-dose methadone was not efficient in that context since addicts could inject heroin and experience its euphoric effect. A primary concern for persons caught up in the spiral of addiction, crime, and incarceration was to accelerate social rehabilitation. This could be more effectively achieved on a daily dose of methadone in the range of 80 to 106 mg than on a low-dose regimen. After rehabilitation is achieved, when the patient no longer abuses drugs, stops criminal activity, and is productively employed, the dose of methadone may either be reduced or kept at a high level. In either case, the dose can be kept constant over an indefinite period of time without impairing the patient's health or behavior.

A New York City followup study, conducted from 1974 through 1976, found that only 8 percent of the 846 discharged patients were alive and doing well (i.e., not in jail or rearrested, abstaining from narcotics use and the excessive use of nonopiate drugs and alcohol). About 34 percent of the 167 patients who left in good standing appeared to be free of the problems associated with drug addiction and alcoholism. Furthermore, those who were described as well after discharge had shorter periods of addiction and longer periods of treatment than those who experienced problems after termination from methadone treatment. Therefore, to expect a high rate of abstinence after 3 or more years of treatment is unrealistic for the addicts with histories of 2 or more years of addiction. Many methadone patients may have to be maintained for longer periods or for the duration of their lives in order to prevent relapse to illicit narcotics (Dole and Joseph 1978).

Methadone maintenance, if correctly implemented, can have a number of cost-effective benefits. For addicts who enter programs, treatment can help curtail or bring under control pathological problems associated with addiction (i.e., crime, unemployment, drug and alcohol abuse, high death rates, AIDS, and hepatitis). Methadone maintenance, however, is not a panacea. It will not eliminate the problem

of illicit opiate addiction, which is partially determined by the availability of illicit opiates. New heroin addicts are constantly created from the thousands of susceptible individuals found in all societies. Also, there is a group of heroin addicts who do not enter treatment. Therefore, the implementation of a well conceived range of treatment programs including methadone maintenance, drug-free programs, and combinations of approaches can be a humane, cost-effective measure that will benefit both the addict and the larger society.

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Some Considerations on the Clinical Efficacy of Compulsory Treatment: Reviewing the New York Experience

James A. Inciardi

INTRODUCTION

The philosophical basis of civil commitment and other forms of compulsory treatment for drug abuse seems to have considerable logic. The theory of civil commitment holds that, of the numerous types of heroin and other substance abusers, some are motivated for treatment, but most are not. Therefore, there must be some lever for structuring treatment for those who ordinarily do not seek assistance on a voluntary basis. This lever has often been referred to in the literature as "rational authority" (Brill and Lieberman 1989; Melselas and Brill 1974)—a late 1960s euphemism for not necessarily punitive but, nevertheless, mandatory treatment.

Compulsory treatment is not a new concept, having been proposed for the first time in the United States shortly after the passage of the Harrison Act of 1914. As early as 1919, the Narcotics Unit of the Treasury Department urged Congress to set up a chain of Federal "narcotics farms" where heroin users could be incarcerated and treated for their addiction (Brecher 1972). The first of these farms was the U.S. Public Health Service Hospital in Lexington, KY, which opened in 1935, with a second facility established in Fort Worth, TX a few years later. The Lexington-Fort Worth approach was simple and to the point. As Lexington's director, Dr. Harris Isbell, once commented:

> Drug addicts were to be treated within the institution, freed of their psychological dependence on drugs, their basic immaturities and personality problems corrected by vocational and psychiatric therapy, after which they would

be returned to their communities to resume their lives. (Kramer 1971, p. 666)

Dr. Isbell went on to note that this original approach had a number of basic flaws. It lacked (1) mechanisms for holding voluntary patients until they had achieved some benefit from hospital treatment; and (2) some provision for intensive supervision and aftercare. Dr. Isbell was reacting to the growing number of reports suggesting that the Lexington and Fort Worth programs were almost total failures. Followup studies had indicated, for example, that between 1935 and 1984 there were 87,000 admissions to the two centers, of which 63,600 were voluntary patients and 23,400 were Federal prisoners. Of the voluntary cases, 70 percent had left against medical advice, and of all the patients, 90 percent had relapsed into drug use within a few years (U.S. Comptroller General 1971; Cole 1987).

The followup studies of the Lexington-Fort Worth experience received considerable criticism (O'Donnell 1965). Nevertheless, the general belief that the Federal model had been an almost total failure, combined with rumors of success with a parole-based narcotic project in New York, influenced legislators and clinicians of the 1960s contemplating the civil commitment approach, to take several things into account.

(1) The 6- to 12-month period of treatment at Lexington had been far too short.

(2) A mandatory minimum length of stay would be necessary even for voluntary cases.

(3) Intensive inpatient vocational and counseling services were highly desirable.

(4) A period of community aftercare was necessary.

(5) Close supervision in the community after release might improve success rates.

(6) For criminal and civil commitments alike, the threat of reinstitutionalization might enhance aftercare response.

Guided by this philosophy, as well as by fears of growing drug-related street crime and public demands for "getting addicts off the street," a series of new programs based on a rational authority design

were established during the 1960s. in 1961, California launched a large-scale civil commitment program for narcotic addicts, which included institutionalization for up to 7 years, without first being convicted of a crime. At the Federal level, the Narcotic Addict Rehabilitation Act of 1966 (NARA) provided for the compulsory treatment of drug users charged with committing nonviolent Federal crimes, treatment instead of sentencing for drug users convicted of Federal crimes, and the voluntary commitment of drug users not involved in criminal proceedings. Also in 1966, New York State announced a civil commitment program of its own, to be operated by the newly created Narcotic Addiction Control Commission (NACC).

Throughout the 1960s, much attention was focused on the New York approaches to compulsory treatment. in addition to the NACC's statewide civil commitment program, there was also a New York City-based parole project that received considerable recognition as an apparent "breakthrough" in the treatment of addiction. Both approaches represent rather unusual case studies in the history of drug abuse treatment—the parole experiment for its alleged high success rates and the civil commitment undertaking for its overwhelming failure. Although each may have been unique in its own way, much can be learned from the New York experience as it relates to future considerations of compulsory-treatment programming.

THE NEW YORK PAROLE PROJECT

In 1956, the New York State Division of Parole announced its Special Narcotics Project, a new approach for the community supervision of parolees with histories of narcotics use. The plan called for "intensive supervision, using the casework approach in an authoritative setting" (Diskind 1960, p. 57). The parole officers used in the project were reported to have been "specially selected and trained." in addition, their caseloads were small, thus permitting closer and more intensive supervision. An initial followup of the first cohort of cases found that some 45 percent had abstained from drugs while under supervision (Diskind and Kionsky 1964a). Subsequent studies reported even more remarkable successes (Diskind and Kionsky 1964b; Diskind et al. 1963), suggesting to observers of the rational authority approach that compulsory treatment might indeed be the key for curing heroin addiction.

But there was much that was misleading in the New York parole findings.[1] First, most of the parole officers in the project were <u>not</u> particularly well trained for the task. Some had been "specially

selected" on the basis of previous experience in caseloads that had high numbers of heroin users, while other parole officers were relatively new recruits, with no prior involvements with parolees, heroin users, criminal justice, treatment, or casework. Moreover, the training was minimal, generally limited to a few lectures on social work approaches, one or two visits to local treatment programs, and the reading of selected journal articles on drug abuse problems.

Second, not all drug cases, at least at the outset, were assigned to the Special Narcotics Project. Case selection was rather discriminating, generally limited to those parolees whose records suggested at least some chance of success.

Third, one measure of failure was rearrest for a new crime, but, as subsequent studies have so dramatically demonstrated, arrest is a rather poor measure of the incidence and prevalence of criminal activity (Inciardi and Chambers 1972; inciardi 1979; Inciardi 1988). A second measure was drug use, and, in this respect, concerted efforts were undertaken to make the project appear better than it actually was. Parolees who were found to be using drugs were often not declared delinquent, and their drug use never became a matter of record. Similarly, a number of project subjects who failed to make their office reports to parole officers-typically because of drug use—were also never declared delinquent.

Fourth, parolees who had reverted to drug use generally knew how to beat the system. "Arm checks," the periodic examination of a parolee's arms for needle marks, was the typical mechanism for determining reversion to drugs. Urine tests were never used, and it did not take parolees long to figure all of this out. Subsequent to the first followup study, it was learned that many parolees were injecting heroin into their groins or were snorting heroin and/or cocaine to avoid detection. One female parolee on the project had actually admitted to her parole officer that she had been injecting heroin into her vagina. Yet procedures for drug detection were never changed, and many regular users of heroin and other drugs were reported as successes in the followup studies.

Fifth, on numerous occasions, when project parolees were found to be using heroin and/or in possession of drugs or stolen property, their parole officers elected not to report the fact to supervisors, in the hope of building a more effective therapeutic relationship with clients.

in 1969, a parole prediction study focusing on cases in the Special Narcotics Project targeted an additional problem (Inciardi 1971a). Two cohorts of parolees were followed up. Adjustment was defined as "unfavorable" if, within 1 year of release from prison, the parolee had been returned to prison for violation of parole, had been arrested for a new offense and not restored to parole supervision, had absconded, had been declared criminally insane, or had died as the result of the commission of a crime or from a drug overdose. Ail other outcomes were defined as "favorable." Although more than 50 percent of the parolees in each cohort were defined as having successful parole adjustment, the study uncovered a factor that further tainted the findings of the narcotics project studies. It appeared that, given the growing racial tension in New York City during the 1960s, the predominantly white, middle-class parole staff were making fewer supervision contacts in those minority neighborhoods where rates of addiction and crime were high. In fact, there were times when certain parts of New York City were specifically designated "not to be visited." Therefore, in many instances, the parole officers were not particularly well informed as to parolee behavior.

in contrast, there were two aspects of the Special Narcotics Project that demonstrated significant clinical efficacy but were never reported in the literature. in 1985, a special arrangement was made between the Division of Parole and Daytop Village, a therapeutic community located on New York City's Staten Island. Although the intake procedures at Daytop were rigorous and the waiting list for admission was often lengthy, parolees would be given special preference under four conditions. First, ail cases had to be assigned to one parole officer, who would visit the facility three times a week and participate in seminars and group encounters; second, that officer had to move into Daytop for a 1-month period as a resident for the sake of better understanding the therapeutic community process.[2] Third, should a parolee admitted to Daytop split from the program prior to the typical 18- to 26-month stay, such an action would result in an automatic violation of parole and a return to prison. Fourth, in the event that a parolee considered splitting from the program, the assigned parole officer (or his backup) had to be on call at all times. The intent was to do whatever was necessary—either counseling or threats—to keep the parolee in treatment, even if it meant arriving at Daytop with handcuffs and an arrest warrant and taking the parolee into custody as he or she exited the facility.

The Division of Parole unofficially agreed to these requirements and, from 1965 through 1967, a total of 43 parolees were accepted into Daytop Village. By June 1968, 16 of the 43 parolees had remained for the duration and graduated from Daytop. Although no formal followup of these cases was ever undertaken, other studies have demonstrated a strong relationship between length of stay and treatment success (Chambers and Inciardi 1975; De Leon 1984).

A second positive feature of the parole project was a rudimentary form of multimodality programming. One of the options available to parole officers assigned to the Special Narcotics Project was referring relapsed cases to local programs for treatment. Yet, during the better part of the project's first decade, few public treatment services were available. As a result, referrals were generally based on one or two personal contacts established by each officer; treatment was generally limited to a 21-day detoxification program, a 6-month stay at a State hospital, or a train ticket to Lexington. By the mid-1960s, however, treatment services had begun to expand in New York City; therapeutic communities, outpatient detoxification, group therapy, and methadone maintenance were added to the existing inpatient detoxification programs. Furthermore, in 1966, 5 of the project's 22 parole officers volunteered for a 9-month (2 evenings per week) training program sponsored by the New York City Addiction Services Agency. The officers were schooled in peer-group and reality therapy approaches as well as a number of diagnostic tools for assessing which type of treatment might be most appropriate for any given case. Although the clinical efficacy of this experience was never empirically assessed, these parole officers did observe that their parolee's retention-in-treatment rates were better than those of their lesser-trained colleagues.

THE NARCOTIC ADDICTION CONTROL COMMISSION

The Narcotics Control Act, passed by the New York State legislature in 1966, served to establish the NACC—a drug treatment system that proved to be both the largest and the most costly in history. A focused analysis of the NACC experience seems warranted here, not because of any clinical successes, but because it dramatically illustrates what not to do when contemplating the structuring of civil commitment for the treatment of drug dependence.[3]

Why the NACC was established in the first place is a perplexing question. It was a civil commitment program in which individuals could be judicially certified to treatment for 3 to 5 years. Subjects

eligible (or at risk) for certification included those arrested for drug-related crimes (drug law violations as well as offenses committed for the sake of supporting a drug habit); volunteers; and others whose friends, family members, or relatives petitioned the courts. The treatment process included a period of institutional commitment followed by community aftercare. The perplexing aspect was that previous research had not convincingly demonstrated that incarceration alone, incarceration plus treatment, or incarceration plus intensive aftercare supervision were effective approaches to the rehabilitation of narcotic addicts. Thus, a planned expenditure of $200 million during the first 3 years for the treatment of 4,500 addicts and alleged addicts, was based on a rather unsubstantial foundation. This was the NACC's first mistake.

The NACC's second mistake was in its selection of institutional facilities. Many of the "rehabilitation centers," as they were called, had been purchased from the New York State Department of Corrections. They were actually medium and maximum security institutions with high walls, barbed wire, observation towers, cell blocks, bars, and all the other visible trappings of penitentiary life. in addition, when the facilities were purchased, civil service regulations required that their existing custodial staff be retained. As a result, a characteristic feature of most of the NACC's rehabilitation centers was former prison guards patrolling halls and cell blocks with riot clubs tucked in their belts—a situation hardly conducive to creating a therapeutic atmosphere.

The NACC's third mistake was in the selection of its treatment facility directors. Rather than seeking out individuals with demonstrated clinical and administrative skills, the NACC filled the majority of these positions with political or civil service appointments. The result was a collection of parole officers with seniority and an ability to pass civil service examinations, combined with local politicians, community leaders, and members of the clergy. Few of these appointees had any experience rehabilitating addicts or running treatment facilities.

The NACC's fourth mistake was in the way it structured its aftercare program. Although the NACC officials vigorously denied that the supervision approach had been modeled after that of the parole system, the NACC's Associate Commissioner in charge of aftercare had been the founder and the director of the parole Special Narcotics Project. in addition, a significant number of the NACC's aftercare officers and supervisors had come to the new agency directly from

the Division of Parole. As a result, the aftercare supewision model was a carbon copy of that found in parole—but with two significant exceptions. First, caseload size in the NACC aftercare centers was too large to permit close supewision. Second, unlike parole officers, the NACC's "aftercare officers" were not armed peace officers, with the authority to arrest a client in the community for violation of his or her aftercare conditions. Thus, abscondence rates were exceedingly high.

The NACC's fifth mistake was its loss of public support through a number of lapses and omissions. For example, by early 1970, having spent more than $345 million, it still had published no statistics from which a success rate might be calculated. indeed, things were not going well with the program and data were closely guarded. An analysis by a member of the NACC research staff compared escapes from NACC's facilities with those of the State's prison system, and abscondance rates from the NACC aftercare with those of the parole system. The data showed NACC abscondance rates to be 12 times higher and NACC escape rates 80 times higher (Inciardi 1971b). The NACC's officials were, in this writer's opinion, less than candid in their public statements about the program's results. Relatively little in the way of research findings was released by the NACC staff, and responses to inquiries about program success tended to be formal and selective. In 1971, the NACC's research director testified before a Congressional committee that a relatively small number of people had been processed through the entire civil commitment process, and that of those "25 percent are currently abstinent, according to physical followup" (Chambers 1971).

in spite of these guarded efforts, the NACC encountered a wave of bad publicity. A report by the New York City District Attorney's office indicated that the NACC was playing a curious role in contributing to the overcrowded conditions in the city jails (New York Times, February 22, 1971). Arrested addicts, the report stated, preferred a short prison sentence to a 3- or 5-year civil commitment. Hence, prosecutors were able to convince arrestees to plead guilty and go to jail; if not, they would be threatened with commitment to a State treatment center. Also, there was the report of the New York City Health Policy Advisory Center:

> The program promises to return the addict to a useful life "through extended periods of treatment in a controlled

> environment followed by supervision in an after-care program." The emphasis is in "controlled." The addict receives about as much in rehabilitation as the criminal prisoner with about as much result—the recidivist rate for addicts is much higher than for criminals. Moreover, the rehabilitation centers are run like prisons. There are guards, most of whom receive training for prison work—one guard for every two inmates, recalcitrant addicts are beaten up and placed in isolation on reduced diets; inmates are sexually abused; there is no separation of the young from the old. The few rehabilitation programs that do exist are staffed by instructors and therapists who have received little or no training. For the 5,000 or so inmates in the 14 separate institutions there are only 4 psychiatrists, 16 psychologists, and 78 teachers and vocational instructors. The prison-like atmosphere has caused a large percentage of the addicts to try to escape. (New York City Health Policy Advisory Center 1970, pp. 16-17)

The NACC officials repeatedly stated that the purposes and approaches of New York's civil commitment program were "misunderstood" (Meiselas 1971; Meiseias and Briii 1974). On the other hand, New York Governor Nelson A. Rockefeller, who had high hopes for the NACC when he launched it in 1966, was more candid. in 1970 he conceded failure, stating:

> it is a god-damn serious situation. I cannot say we have achieved success. We have not found answers that go to the heart of the problem. (Moritz 1970)

By 1971, the NACC officially had been deemed a failure, and, in subsequent months, its gradual dismantling began.

DISCUSSION

In retrospect, the New York parole experiment was little more than a treatment initiative that had been poorly conceived, inappropriately designed and studied, and considerably misrepresented. The political environment within which the NACC had been created initially resulted in a leadership that was ill-experienced and ill-equipped to deal with the magnitude of its task, and, ultimately, in a bureaucracy gone out of control, concerned more with its own survival than with therapeutic efficacy. But, in light of subsequent developments and

recent research findings, the New York experience can now be viewed as significantly more important than just a historical anecdote In the annals of drug abuse treatment.

Conscious of the dubious outcome of civil commitments in New York, but, nevertheless, convinced of the need for coercing heroin and other drug abusers into treatment, President Richard M. Nixon's Special Action Office for Drug Abuse Prevention developed, in 1972, a national compulsory treatment strategy of its own. Initially funded by the Law Enforcement Assistance Administration, the idea was to divert drug-addicted criminal offenders out of the court system and into appropriate community-based treatment facilities. Known as TASC (Treatment Alternatives to Street Crime), the approach sought to establish a multifaceted intervention strategy featuring jail screening, comprehensive medical and clinical diagnosis, referral to suitable treatment facilities, monitoring of patient progress, and custodial counseling. To eliminate many of the difficulties associated with civil commitment, TASC was structured initially as a court diversion program. Drug-using arrestees were diverted into the array of existing, ongoing treatment facilities in the local community. The offender's original criminal charge was held in abeyance until treatment was completed. Failure to remain in treatment could result in the offender's arrest, a visit to court, and prosecution on the original charge. Later TASC activities were established in parole settings, and subsequent studies of TASC clients, as well as commitments to the California Civil Addict Program, began to demonstrate that compulsory treatment did indeed have its successes (De Leon 1994; De Leon and Rosenthal 1979; McGlothiin et al. 1977).

The recent indications of success with compulsory treatment, when contrasted with the overwhelming failure of New York's NACC, provides an important lesson for the future direction of mandatory treatment initiatives—that the implementation of any new approaches should avoid, at all costs, the creation of new, large-scale treatment bureaucracies. Part of the NACC's problem was an all too hastily structured treatment and control system as a response to the hysteria surrounding the growing epidemics of heroin use and drug-related street crime. It was likely for this reason that the NACC's staffing structure became so tainted by politics and inexperience. Moreover, by creating new treatment facilities and a comprehensive aftercare network, the NACC had committed itself to large capitalization costs. Finally, it was the fact that the NACC was almost exclusively a political entity, with its awesome expenditure of tax dollars, that contributed decisively to its failure.

With the growing concern about AIDS and the position of the intravenous drug user in the transmission of this disease in the heterosexual community, it is not unlikely that many observers and legislators might reconsider a NACC-like entity as a mechanism of quarantining the addict for the purpose of AIDS control. But the same mistake should not be made. The obvious alternative to the NACC approach is the expansion of compulsory treatment in an already existing infrastructure—such as TASC. Such an arrangement delegates rehabilitation to established treatment structures and management and control activities to the courts, parole, and probation.

Should compulsory treatment expand in a TASC-like direction, then the New York parole experiment offers some guidelines. The first is the notion of some type of treatment contract. The apparent success of parolees placed in Oaytop Village was, in part, the result of the parole system's agreement to Daytop's requirements. In future initiatives, perhaps there should be written contracts between client, clinician, and criminal justice representative, which spell out each participant's expectations, requirements, and responsibilities.

The second issue relates to evaluation. There was much going on in the New York Parole system that project researchers and evaluators were either unaware of and/or chose to ignore. There were so many uncontrolled-for variances in training, supervision approaches, parolee behavior, parolee/parole officer interaction, case assignment, and decisionmaking that whatever data were collected were far too tainted to be of any value. Therefore, research endeavors to evaluate program effectiveness must go beyond their traditional concerns to focus also on the structure and policies of criminal justice system components that manage clients receiving compulsory treatment.

FOOTNOTES

1. The observations reported here are those of the author, who was a parole officer in the Special Narcotics Project from 1962 to 1968.

2. The author of this essay was the officer assigned to Daytop Village.

3. From June 1968 through October 1971, the author was Associate Director of Research for the Narcotic Addiction Control Commission, and a number of the observations recorded here are unreported in the literature.

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Identifying Drug-Abusing Criminals

Eric D. Wish

INTRODUCTION

This chapter describes issues relevant to the identification of drug abusers within the criminal justice system. In the first section, some of the reasons why the identification of drug-abusing offenders may be an important role for the criminal justice system are discussed. This is followed by a review and comparison of available methods for screening large numbers of offenders for recent drug use. The chapter concludes with a discussion of the implications for establishing compulsory treatment programs within the criminal justice system.

WHY IDENTIFY THE DRUG-ABUSING OFFENDER?

To Identify Active Criminals

During the past decade, substantial information collected from diverse offender populations has converged to show that addicted offenders are especially likely to commit both drug and nondrug crimes at high rates (Wish and Johnson 1986). Heroin addicts in Baltimore reported committing six times as many crimes during periods when they used narcotics frequently as in periods of lesser use (Ball et al. 1981; McGlothlin 1979). Violent predators, the most criminally active class of incarcerated persons, were distinguishable by their histories of juvenile drug abuse and adult high-cost heroin habits (Chaiken and Chaiken 1982). Offenders' drug abuse has been prominent in many of the more useful criminologic scales designed to predict recidivism (Blumstein et al. 1986). Recent studies of arrestees in Washington, DC and New York City have found that persons who test positive by urinalysis at arrest for one or more drugs (usually cocaine, heroin, or

PCP) had a greater number of rearrests than did arrestees with a negative test result (Toborg et al. 1986; Wish et al. 1986a). Perhaps most important, treatment-induced reductions in narcotics use have been associated with concomitant reductions in individual crime rates (McGlothlin et al. 1977). While early research focused primarily upon the link between heroin use and crime, a number of recent studies have documented the growing role of cocaine in street crime (Collins et al. 1985; Hunt et al. 1984; Johnson et al. 1985).

There are a number of reasons why drug abuse and crime are associated. In some instances, persons are so dependent upon a drug that they are driven to commit income-generating crimes like theft, robbery, drug selling, and prostitution. For other persons, drug abuse appears to be merely one of the many deviant behaviors they engage in; while for still others, crime may be the result of a violent, bizarre reaction to a drug. In planning effective responses for each person, it may be necessary to understand which of the above motives apply.

Because drug-abusing offenders account for a disproportionate share of all crime, a policy that focuses upon identifying drug-abusing offenders and applying appropriate interventions has promise for producing a substantial impact on community crime and the overburdened criminal justice system. Certainly, one would prefer to apply limited criminal justice resources to the most active offenders. There is growing evidence that criminal justice referral of offenders to drug abuse treatment programs, often accompanied by urine monitoring, can result in persons remaining in treatment longer and in a reduction in both drug use and crime (Anglin and McGlothlin 1984; Collins and Allison 1983; Stitzer and McCaul, in press). There is also the possibility that one might reduce jail and prison overcrowding by referring drug-abusing detainees to treatment and/or urine monitoring programs. In addition, because younger offenders are less likely to inject drugs and to use heroin, identification of the youthful offender, who is abusing such drugs as marijuana, PCP, or cocaine, has promise for enabling society to intervene and prevent the progression to more extensive drug use (Dembo et al. 1987; Wish et al. 1986a).

To Identify Persons in Need of Drug Abuse Treatment and Health Care

Drug abusers, especially persons who inject drugs, are at high risk for health problems (Goldstein and Hunt 1984). Intravenous drug

users are especially at high risk for contracting AIDS by sharing dirty needles that contain blood from infected fellow addicts (Marmor et al. 1984). Prostitutes are also likely to have serious drug abuse and associated health problems. The probability of a urine positive for drugs was higher for female arrestees in New York City than for male arrestees (Wish et al. 1986a). More than 89 percent of the prostitutes among the female arrestees studied in New York City in 1984 were positive for cocaine. These females frequently reported instances of childhood sexual abuse and protracted histories of emotional and health problems. Because prostitutes usually receive fines or very short sentences (often as time served), they are usually back on the streets of New York within hours of arrest, with no effort made to identify and treat their drug abuse or health problems. Given that more than one-half of the arrestees in Washington, DC and in New York City have been found to test positive for one or more drugs, it would seem that the criminal justice system offers an unusual opportunity to society for identifying persons in need of immediate health care.

To Monitor Community Drug Use Trends

As illicit drugs become available in a community, more deviant persons can be expected to be among those who first use them. In time, use spreads to the larger society. One might, therefore, predict that changes in the level of illicit drug use in an offender population would be a leading indicator of community drug use. A comparison of urine test results for arrestees in Washington, DC with the traditional indicator of community drug use showed this to be the case (Wish 1982; Forst and Wish 1983). In Washington, DC, the rise in heroin use between 1977 and 1980 showed up in the statistics from the arrestee urine testing program 1 to 1.5 years before it appeared in local statistics *on* overdose deaths, hospital emergency room admissions, and drug abuse treatment program admissions. Results from the arrestee urine testing program in Washington, DC and research in New York (Wish 1986b) have also documented the rising use of cocaine in these cities in the 1980s.

By operating a program of arrestee drug testing on a regular basis, communities may derive a secondary bonus of being able to detect drug epidemics earlier and being able to plan community responses. The potential benefit of offenders' urine testing for tracking drug crime trends has prompted the National Institute of Justice to establish a national Drug Use Forecasting (DUF) system based on urine samples obtained periodically from arrestees in large cities

(Science 1968, Wish 1987). The impact of law enforcement and other interventions designed to reduce drug use and production can also be measured by an ongoing drug testing program. A study, conducted in the 1970s establishing the feasibility of urine screening in jail facilities serendipitously uncovered the availability of propoxyphene in the community. These results alerted law enforcement agencies to the problem, so that action to locate the suppliers could be taken (National Institute on Drug Abuse 1979).

HOW CAN ONE IDENTIFY THE DRUG-ABUSING OFFENDER?

For a civil commitment program to operate within the criminal justice system, there must be a feasible means available for screening large numbers of persons for recent drug use. The methods utilized must be low in cost, accurate, and capable of being implemented with minimum disruption to the already overburdened criminal justice systems in most large cities. Four methods are used: offenders' self-reports, criminal justice records, urinalysis tests, and radioimmunoassay of hair (RIAH). Blood tests are excluded from consideration because of the general difficulty presented by drawing blood from large numbers of detainees, as well as because of the fear of AIDS transmission. Also excluded are breathalyzer tests, because alcohol is a licit drug and is not in itself an indicator of high-rate criminal activity (Wish et al. 1986b). Physical and behavioral signs of drug use as well as intoxication are also excluded, primarily because they are already widely employed to identify the sick drug-abusing offender who is experiencing withdrawal symptoms or strong drug reactions, but also because they are less useful for identifying other users. Hair analysis is also discussed, even though it is in an experimental stage and still very expensive, because it has some interesting potential advantages over the other techniques. A more detailed description of these techniques can be found in Wish (1986b).

Offenders' Self-Reports

There is a long tradition in social science research of being able to obtain valid self-reports about deviant behaviors, including illicit drug use. Some of the best estimates of drug use have come from studies involving personal interviews or self-administered questionnaires (Robins 1974; Elliott and Huizinga 1984; O'Donnell et al. 1976; McGlothlin et al. 1977; Johnston et al. 1977). Much of what is known about the relationship of drug abuse to crime has also come from studies that have relied upon offenders' self-reports. The validity of the information obtained in these studies has usually been tested and

confirmed by comparing the respondent's self-reports with information in official records or the results of a urine specimen obtained at the conclusion of the interview (Wish and Johnson 1986; Harrell 1985). Even when we have interviewed active criminals in our secure, confidential research storefront in East Harlem, we have found considerable agreement between self-reported drug use and the urine tests (Wish et al., unpublished manuscript: Wish et al. 1983). Among the most important reasons why the respondents in these studies appear willing to disclose sensitive information about themselves are that the data are collected voluntarily, for research purposes only, in a safe environment, and that the anonymity and confidentiality of the information is assured.

These are conditions that do not exist when attempting to identify drug-using offenders detained in the threatening criminal justice system. The evidence is convincing that detainees will severely under report their recent drug use, even in a voluntary, confidential research interview. Table 1 compares self-reported drug use, obtained in a research interview, with urine analyses for an arrestee population. The Enzyme Multiplied Immune Test (EMIT) was used to analyze the urine samples. It is clear that twice as many arrestees were found positive for any drug by urinalysis than admitted to recent use in a confidential, voluntary research interview in Manhattan Central Booking. Arrestees who refused to participate in the confidential research interview had a high likelihood of rearrest, similar to that found for arrestees who provided a urine sample that was positive for multiple drugs. When the pretrial release interview information was compared with their urinalysis test results, arrestees in Washington, DC were also found to underreport their recent use of drugs by about one-half (Toborg et al. 1986). Similar findings were obtained from a recent study of probationers assigned to the intensive supervision probation program in New York City (Wish et al. 1986c). In that study, only 24 percent of the probationers admitted to recent drug use in a confidential research interview in the probation department office, while 68 percent tested positive by urinalysis (table 2). Moreover, probation officers, who indicated that they relied the most on the probationer for information about his current drug use, also underestimated by 23 percent the prevalence of current drug use in their cases.

If valid self-reports of recent drug use cannot be obtained in a voluntary, confidential research interview held within the criminal justice system, it is obvious that they cannot be obtained when the

TABLE 1. *A confidential research interview: Extent to which arrestees underreport their recent use of drugs (n=4,847 specimens from male arrestees in Manhattan Central Booking in 1984)*

	Repotted Using Drug 24 to 48 Hours Before Arrest (Percent)	Positive by EMIT at Arrest (Percent)
Cocaine	20	42
Opiates	14	21
Methadone	6	8
PCP	3	12
Any of the above:	28	56
2+ of the above:	11	23

TABLE 2. *Estimates of recent drug use in probationers from self-reports, urine tests, and probation officer ratings (n=66)*

Drug	Probationer Reported Use in 24 to 48 Hours Before Interview (Percent)	Probationers Rated by Probation Officer as Using Drug In Past Month (Percent)	Urine Test at Interview (Percent)
Marijuana	24	21	42
Cocaine	3	9	52
Heroin	3	3	2
PCP	0	0	2
Methadone	2	3	0
Any of the Above	24	23	68

information is to be used to require a person to enter treatment or a urine-monitoring program.

In spite of these limitations, there are important reasons for using self-reports to identify drug abusers detained by the criminal justice system. Although self-reports would detect only a small portion of drug users, persons who do admit to drug use are a bona fide group for further action. A study of juvenile detainees (Dembo et al. 1986) found that youths who tested negative for marijuana but admitted to recent marijuana use had detention records that were more similar to persons who tested positive than to youths who were negative by test and self-report. The authors conclude that it would be beneficial to target for further assessment youths who were positive by urine test *or* who reported recent drug use.

Furthermore, in our study of New York City arrestees, our research found that self-reports of current drug dependence or of a need for treatment were valuable in differentiating which of the persons who tested positive were more seriously involved with drugs and crime. Table 3 shows that, among all arrestees who tested positive, those who admitted to drug or alcohol dependence at arrest or to a need for treatment were much more likely to report recent drug use, injection of cocaine, and prior treatment. The dependent persons also had more extensive criminal records than did nondependent persons.

Thus, while many drug abusers will conceal their drug problems, those who do report serious drug problems while in the criminal justice system may be a valid group for further assessment and diversion to treatment. Jurisdictions wishing to implement some immediate, low-cost action to identify drug abusers could assign persons to interview detainees and to refer them to treatment programs. Although many drug abusers would go undetected, the number of persons identified would probably be what most cities could handle, given the usually overburdened and limited treatment resources.

In summary, self-report information can be very valuable for obtaining indepth details about drug abuse, if the offender is willing to disclose the information. It is a poor method to use as the primary tool for screening detained drug users. The most promising use of offender self-reports for the criminal justice setting is probably to combine them with other evidence of drug use to motivate the offender to discuss his behavior.

TABLE 3. *Drug use and criminal history in male arrestees who tested positive for drugs (New York City, 1983) by self-reported dependence or need for treatment*

	Not Dependent (n=1,651) (Percent)	Dependent* (n=926) (Percent)
Drug Use (From Self-Reports)		
Reported Using		
24 to 48 Hours Prior to Arrest		
Cocaine	15	61
Heroin	6	53
Marijuana	34	36
Downers	2	12
Illicit Methadone	1	8
PCP	3	6
Injects Cocaine	9	61
Ever received drug treatment:	11	60
Criminal History (from records)		
Ever Arrested Before	76	91
Two or More Prior Misdemeanor Convictions	32	60
Two or More Prior Felony Convictions	10	14
Had a Prior Arrest for a Drug-Related Offense	33	59

*Male arrestees who tested positive for one or more drugs (opiates, cocaine, PCP. or methadone) and who reported current dependence on drugs or alcohol or a need for treatment.

Criminal Justice Records

The criminal justice system maintains extensive information files on offenders. In view of the preceding discussion, and the fact that much of the information in these records is obtained from the offender, it is not surprising to find that information about the offender's involvement with drugs is often minimal and unreliable (Goldstein 1986).

Even when an arrest report has a place to enter information about the arrestee's drug use, it typically is not completed. This is probably because the police officer is often unaware of the arrestee's involvement with drugs and because information not of immediate relevance to an officer tends not to be reliably entered into a data system. Even in Washington, DC where the U.S. Attorney has installed the prosecutor's management information system (PROMIS) to track case information, the arresting officers identified only 22 percent of those who were found positive for drugs at arrest by urinalysis (Wish et al. 1981). Presentence investigation reports should contain more information about the offender's background. However, in the absence of urine tests, the investigator must rely upon the defendant's admission of drug use *or* information from a family member. In large cities, the time and resources available for soliciting such information is limited.

If records do not contain detailed information about drug involvement, can a person's arrest record of drug offense convictions serve as an accurate indicator of drug use? The evidence indicates that persons charged with the sale or possession of controlled substances are most likely to be drug users (table 4).

Almost three-quarters of male arrestees in New York City (and of arrestees in Washington, DC) charged with these offenses in 1984 tested positive for opiates, cocaine, methadone, or PCP. However, more than half of the persons charged with robbery, burglary, larceny, or murder were also positive for drugs (Wish et al. 1986a). Fifty-six percent of these arrestees were positive for a drug, while only 20 percent of the sample were charged with a drug offense. Only 10 percent of the 17,000 male and female arrestees who were drug positive by urinalysis in Washington, DC in 1973 and 1974 were charged with a drug offense (Wish et al. 1981). Thus, while offenders with a history of drug offenses are most likely to be using drugs, it is clear that offenders charged with a variety of other

TABLE 4. *Charges most associated with a positive urine test, male arrestees in New York in 1984*

Arrest Charge	Number	Percent Positive*
Possession of Drugs	615	76
Sale of Drugs	355	71
Possession of Stolen Property	474	61
Forgery	94	60
Burglary	348	59
Murder/Manslaughter	64	56
Larceny	667	56
Robbery	676	54
Weapons	157	53
Stolen Credit Cards	56	52
Criminal Mischief	66	48
Gambling	147	45
Sexual Assault	79	41
Public Disorder	108	37
Assault	506	37
Fare Beating	98	37
Fraud	54	30
Other Offenses	269	45
Total	4,833	56

*Positive by EMIT for opiates, cocaine, PCP, or methadone.

offenses may be drug users. By relying solely upon a drug offense to identify the drug user, the majority of users are missed.

Urinalysis Tests

In recent years, urinalysis tests have received considerable attention as a source of information about an offender's drug use (Wish 1982; Forst and Wish 1983). It should be noted, however, that researchers have used urinalysis for the past 15 years to validate information obtained in interviews about recent drug use, and drug abuse treatment programs have often monitored patients' drug use by

urinalysis (McGlothlin et al. 1977). Urine tests were employed successfully by the Department of Defense to screen army personnel before they left Vietnam for the United States in the 1970s, and have been used in recent years to combat a growing drug use problem. Furthermore, in the initial years of the federally sponsored Treatment Alternatives to Street Crimes (TASC) program, urinalysis was used to identify drug-using offenders for diversion into treatment programs. Urine tests have been used by the U.S. Department of Probation and by local probation departments to screen suspected drug users. Mass screening of offender populations for drugs has been used only in Washington, DC, however, where all arrestees detained in the Superior Court lockup prior to court appearance have been tested since 1971.

There are a number of possible urinalysis techniques, and a common error made by persons assessing the validity of drug testing is their failure to consider the type of test used. Until recently, most urine testing of offenders in the criminal justice system and in treatment programs was conducted using a Thin Layer Chromatography (TLC) general screen. This technique is especially economical because it can screen for a variety of drugs, but it is an extremely subjective process requiring experienced technicians to interpret the results.

Primarily because of their low cost, sensitivity, and ease of use, the most commonly used urine test today is the EMIT. The EMIT involves a chemical reaction of the specimen with an antibody designed to react to a specific drug. The chemical reaction causes a change in the specimen's transmission of light. This change in transmissibility is detected by a machine that provides a quantitative reading that is compared with the reading from a standard solution containing a known concentration of the drug. If the reading from the specimen is higher than that of the standard, the specimen is positive for that drug. Because the determination of a positive is based on specific numbers, the level of subjectivity involved in the EMIT is less than that for TLC. TLC appears to be more economical because, for approximately $2, as many as 20 different types of drugs can be tested. EMITs are specific to one drug and cost between $1 and $5 for each drug tested. (These are high volume, reduced rates charged to researchers by the New York State Division of Substance Abuse Testing Laboratory.)

Table 5 presents a comparison of the results from 4,647 specimens obtained from arrestees in New York City and tested by TLC and the EMIT technique by the New York State Testing Laboratory.

TABLE 5. *Drugs detected in urine specimens from male arrestees by type of test (n=4,847 specimens from arrestees in New York City in 1984)*

Drug Detected	TLC (Percent)	EMIT (Percent)
Cocaine	14	42
Opiates (Morphine)	9	21
PCP	NA	12
Methadone	4	8

Table 5 makes clear that the TLC test underdetects the common street drugs by almost two-thirds. Many laboratories have used a two-test approach to identifying drugs. These labs first screen for drugs using TLC and then confirm any positive result by an EMIT. Such procedures would clearly result in many drug users escaping detection. As a result of the above findings, EMITs are being substituted for TLC tests across the country.

The growing popularity of the EMIT has brought several legal challenges. The primary criticism is that the EMIT has too high a rate of false positive errors. That is, the test falsely indicates the presence of a drug. Much of the debate surrounds the possibility that some common licit drugs can cross-react with the test's reagents to produce a positive result (Morgan 1984). The ingestion of poppy seed bagels has produced a positive test result for opiates. Furthermore, the EMIT for opiates will detect heroin (morphine) as well as prescribed drugs such as codeine. Sloppy recording procedures by laboratory staff and failure to maintain the chain-of-custody for the specimen can also produce serious test errors.

There are other urinalysis techniques available for detecting drugs, including radioimmunoassay and gas chromatography/mass spectrometry (GC/MS) (Hawks and Chiang 1986). Some of these techniques have not been used frequently in the criminal justice system, and sufficient case law does not exist regarding whether the courts consider them to be valid. GC/MS is too costly and time consuming to be used as the initial test in large-scale screening programs, although it has been required by some courts as a confirmation test.

A study by the Center for Disease Control (CDC) has been cited for revealing substantial errors in the results from the 13 labs surveyed

(Hansen et al. 1985). In a blind experiment, CDC sent a group of blank urine specimens as well as specimens containing known quantities of drugs to the labs for analysis (the specific urinalysis tests used by the labs were not specified). The study found that while some labs failed to detect specific drugs contained in the specimens, few instances occurred where a lab reported a drug in one of the blank specimens. In fact, the average accuracy of the analyses of the blank specimens was 99 percent; there were so few false positive results that the analyses of this issue were limited. There were too few false positive results to permit analysis of their occurrence.

The experience of this writer in using urine tests in offender populations also indicates that the problem of false negatives is much larger than that of false positive errors. In contrast to controlled laboratory experiments, tests for illicit drugs in offenders cannot control for many of the factors that influence the drug concentration in the urine. The quantity of the drug taken, its purity, and its time since ingestion are unknown. It is, therefore, somewhat amazing when a test does detect a drug. Studies by this writer show that even when a person admits to taking a drug 1 or 2 days before the test, it is found in only 70 to 80 percent of the cases. Many drug users will, thus, escape detection by urinalysis.

It is probable that the future of urine testing in the criminal justice system will depend on a satisfactory solution of the problem of false positive errors. Preliminary NIDA guidelines for testing state that all positive test results from immunoassay tests should be confirmed by GC/MS. GC/MS is the most accurate technique currently available for identifying drugs in the urine, but it costs about $70 to $100 per specimen. It seems appropriate to require such a procedure when a single test result may cause a person to lose their job or liberty. However, when a test result is used solely to trigger further investigation of whether a person is involved with drugs, it may be that confirmation by other methods (urine monitoring or diagnostic interview) would be equally acceptable. The courts have yet to decide this issue.

Even though urine tests do contain some degree of error, the evidence is strong that the tests have a high degree of validity. The EMITs have been ruled valid by judges, although courts have differed on the need for confirmation of positive results (Wish 1986). Furthermore, the construct validity of urine tests, the evidence that the relationships found with the tests are consistent with the current

knowledge about drug use, is impressive. Studies of arrestees and probationers in New York City and Washington, DC have found hypothesized relationships between detected drug use and age, prior arrest history, type of arrest charge, and recidivism (Wish and Johnson 1986; Wish et al. 1986a; Toborg et al. 1966). A positive test for marijuana was related to greater lifetime use of marijuana and a greater number of juvenile detentions in Tampa, FL (Dembo et al. 1986). In fact, this writer first discovered the lesser sensitivity of the TLC test because the analyses of specimens from unapprehended offenders interviewed in a research storefront in East Harlem did not confirm the heavy drug use that these persons were reporting. Only after the EMITs were used was the claimed drug use verified by the urine tests (Wish et al. 1983). Perhaps of primary significance is the finding from studies in Washington, DC and New York City that not only the presence of a drug, but also the number of drugs detected was related to criminal behavior. For all age groups, arrestees positive for two or more drugs (usually cocaine and opiates) had the greatest number of rearrests (figure 1). Furthermore, 60 percent of the rearrests for multiple drug users were for offenses other than the sale or possession of drugs.

The proportion of offenders who are found positive and are seriously involved with drugs is unknown. For this reason, a positive urine test should be used with other information (self-reports, criminal justice records, or repeated urine testings) to determine if the offender chronically abuses drugs and is in need of treatment.

RIAH

RIAH is an experimental procedure with potential for drug detection. As hair is formed in the scalp, the cells are nourished by the blood, and drugs present in the blood are deposited in the cells at the root level. One can extract the drugs from the hair for analysis by radioimmunoassay. Researchers have found that the level of the druG taken is correlated with the amount deposited in the hair cells. Perhaps of most importance is that a historical record of a person's drug use level can be obtained. While hair at the scalp level contains evidence of current use, hair further from the root contains evidence of use months before the root was formed. Thus, by analyzing sections of hair, especially in persons with long hair, a trend in drug use over time can be obtained (Thanepohn 1986; Witherspoon and Trapani 1983), and procedures are available for detecting the most commonly abused drugs.

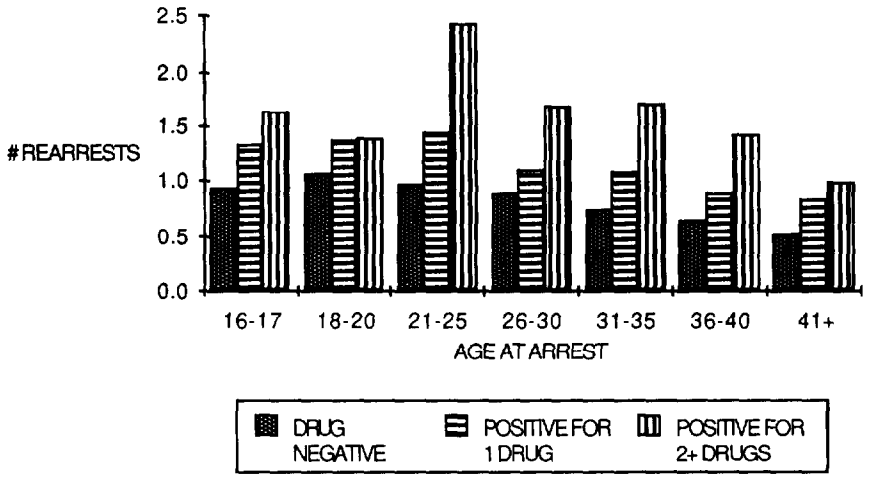

FIGURE 1. *Mean number of rearrests by urine test and age, Washington, DC and New York City, 1984 (n=4,847 male arrestees in New York City in 1984)*

NOTE: Rearrests are measured in an 11- to 17-month period after the index arrest. These findings do not control for time-at-risk on the street. Differences would be expected to be more extreme, however, because drug users were somewhat more likely to be remanded after arraignment than were nonusers.

SOURCE: Wish et al. 1986a.

One possible advantage of RIAH is that the test cannot be easily falsified. For example, an individual cannot suspend use before a scheduled test to avoid detection. Once the drug is stored in the hair, it remains there permanently. The technique of obtaining hair is noninvasive and less objectionable to some persons than that of obtaining urine. The analysis can provide evidence of the level and trend of use over time. In addition, if the test is inconclusive or a retest is required, a similar sample for analysis can be easily obtained. The largest drawbacks to the test include the fact that it requires radioactive materials and the types of precautions usually needed in handling such substances, the cost (roughly $50 per drug tested), the turnaround time of approximately 24 hours, and the unavailability of standardized and accepted extraction techniques. In addition, there is some possibility that hair content can be influenced by environmental contaminants (Puschel et al. 1983).

Even if current research confirms the utility of RIAH, the long turnaround time for the analysis and the cost may prohibit the adoption of the method for large-scale screening of offenders. In addition, it will take considerable time for the courts and the scientific community to acknowledge the validity of the new technique. If the technique is eventually accepted and the analysis time remains long, it will most likely be less useful than other techniques for testing pretrial arrestees, where the judge typically requires the results quickly at the time of arraignment. Perhaps the most valuable use for RIAH with offenders will be for the confirmation of other test results and for the verification of changes in the person's use.

Summary

In a criminal justice setting, urine testing is the most feasible and accurate method now available for screening large numbers of drug-using offenders. Self-report and record information can be effectively used to verify and extend information about the seriousness of use for those who test positive. The newer RIAH methods offer promise for delineating patterns of drug use over time if the method is valid, can be standardized, and gains acceptance from the scientific and judicial communities.

CONCLUSIONS AND IMPLICATIONS FOR COMPULSORY TREATMENT

For the purpose of this chapter, compulsory treatment is defined as the involuntary or voluntary ordering of persons from the criminal justice system into some form of drug abuse treatment and/or urine monitoring. The following conclusions may be drawn from the research as presented here.

- Fewer than one-half of the adults detained or supervised by the criminal justice system will voluntarily admit to recent use of illicit drugs.

- Those persons who do report current drug abuse problems or dependence tend to have serious problems and are a valid group for treatment consideration.

- Urinalysis can be an effective tool for screening large numbers of offenders for recent drug use. However, the tests only indicate probable use and must be followed by confirmation of the amount

of drug involvement. Confirmation can be achieved through repeated testing over time, confrontation and interview with the persons, and information obtained from records or reports from persons who know the detainee.

This discussion has intentionally been limited to the methods available for identifying drug abusers within the criminal justice system. Other papers in this volume describe the efficacy of various types of treatment for persons who have been referred from the criminal justice system. It is important to note, however, that, because little systematic screening for drug abusers has occurred in the criminal justice system, most research has examined treatment process and outcome for the select group of offenders who were referred from the courts. Little is known, outside of the research from the pretrial testing program in Washington, DC (Carver 1986), about the level of effectiveness of such interventions for a larger, more diverse group of treatment referrals that would result from a wide-scale urine screening program. Additional research on matching criminal justice referral clients to appropriate, effective interventions will be necessary in order to make compulsory treatment a viable option for the criminal justice system.

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Legal Pressure in Therapeutic Communities

George De Leon

INTRODUCTION

Compulsory treatment as a legal mechanism for changing the behaviors of antisocial substance abusers is not new to therapeutic communities (TCs). In the years 1965 through 1975, numbers of drug abusers were court mandated to TCs as an alternative to Federal and State treatment programs operated under civil commitment legislation. After 1975, the civil commitment programs were largely replaced by community-based treatment centers that have included TCs; accordingly, civil commitment procedures were replaced by the less uniform set of activities termed "legal referral." Thus, our understanding of compulsory treatment in TCs is mainly drawn from research and clinical experience with legal referrals, rather than with civil commitment per se.

The present chapter reviews what is known about compulsory treatment in drug-free TCs. The initial section summarizes research on posttreatment outcomes and retention in treatment for legally referred clients. The concluding sections discuss policy issues and implications for research. The treatment research literature surveyed is not exhaustive. It is primarily restricted to program-based studies in TCs of acceptable design, which include variables termed "legal referral," "legal status," "criminal justice referral," and "nonvoluntary referral." These different labels constitute a problem in assessing outcome research, since they describe a variety of activities and procedures that are not necessarily similar across the studies.

There are approximately 500 drug-free residential treatment settings in the United States, of which less than one-third label themselves as

traditional TCs. The latter have been characterized in other writings (De Leon 1986a).

LEGAL REFERRAL TO THERAPEUTIC COMMUNITIES

TCs have always served clients referred from the criminal justice system. Indeed, there are notable pioneering demonstration programs in which TC models have been introduced directly into the correctional system (Tech 1980). Contemporary variations on the TC within the correctional system are described in the literature (Wexler 1986). What is known about compulsory treatment for TC clients has been learned mainly from those residential treatment programs that are community based and are outside the correctional system.

Legal referrals constitute less than one-third of all admissions to drug-free residential modalities documented in the Client Oriented Data Acquisition Process (CODAP) (National Institute on Drug Abuse 1980). Most of these programs, however, are not representative of the traditional long-term TC. Among the latter, legal referrals approximate 30 percent (De Leon 1960). Although there are wide program differences, some TCs serve criminal justice clients almost exclusively.

Legal referral rates to TCs have varied across the years. For example, more than 40 percent of admissions to Phoenix House in 1970 were legally referred, compared to less than 20 percent in 1985. Other TCs have informally reported a similar decreasing trend in legal referral.

Although not fully understood, trends in legal referral to TCs generally relate to at least two broad issues. First, there has been a significant change in drug use patterns. Admissions to TCs now include significantly fewer opiate users and increasing numbers of nonopiate abusers. This change in admissions to TCs may reflect an actual decrease in the number of new heroin abusers, or it may indicate a shift to other treatment modalities. Generally, the pervasive use of drugs at all levels of society has resulted in more users who are minors or who have noncriminal backgrounds. As a result, there has been less need for TC programs to recruit clients from the criminal justice system.

Second, policy issues may affect referral rates. For example, criminal justice enforcement policy on drug-related crimes has varied over

time. Implementation of street arrest and sentencing practices shifts in relation to a variety of social, economic, and political forces.

A subtle policy issue concerns the relationship between the criminal justice and drug treatment systems. The criminal justice system has remained either uninformed or unpersuaded about the positive role of rehabilitation for the drug-abusing criminal offender. This view may have influenced referral rates to community-based treatment after the phasing out of civil commitment programs. Nevertheless, current social pressures, crowded courtrooms and jails, and the threat of AIDS spreading through the intravenous-drug-using population have rekindled interest in treatment as an alternative to incarceration for drug abusers.

THERAPEUTIC COMMUNITY OUTCOMES

The literature on the effectiveness of TCs has been reviewed in other writings (De Leon 1965; De Leon and Rosenthal 1979). Some outcome studies have been executed by investigative teams engaged in large-scale multimodality comparisons that include TCs, e.g., the Drug Abuse Reporting Program (DARP) and the Treatment Outcome Prospective Study (TOPS). Others have been conducted on, and by, individual TCs. Although cited here when relevant, the findings for the multimodality studies are reported elsewhere in this volume. This section summarizes the main findings of program-based studies.

All studies reveal that immediate and long-term outcomes for clients are significantly improved over their pretreatment status. Drug use and criminality decline, while measures of prosocial behavior, e.g., employment and/or school involvement, increase (e.g., Barr and Antes 1981; Brook and Whitehead 1980; De Leon 1984; De Leon et al. 1972; De Leon et al. 1979; Pompi et al., unpublished manuscript; Wilson and Mandelbrote 1978).

A few studies have utilized a composite index of successful outcome combining measures of criminal activity, drug use, and employment. In these studies, maximally or moderately favorable outcomes occurred for approximately half the clients (De Leon 1984).

Studies that examine differences between clients who complete treatment, i.e., graduates, and those who drop out indicate that graduates are significantly better than dropouts on all measures of outcome. Among dropouts, however, there is a positive relationship between

outcome and length of stay in treatment (e.g., Barr and Antes 1981; De Leon 1964; Holland 1983).

Research has yet to delineate a client profile that predicts successful outcome. Several background correlates of positive outcomes on drug use, criminality, or employment have been identified, e.g., lower lifetime criminality, lower pretreatment baseline levels of drug use or crime, and higher employment. Though significant, these associations are small when compared with the effects of time in program.

Outcomes for Legal Referrals

Most TC followup studies report either small or no differences in posttreatment improvement by legal referral, depending upon the outcome measures employed (Barr and Antes 1981; Holland 1983; Pompi et al., unpublished manuscript; De Leon 1984). For example, followup status based upon agency records indicates that total arrest rates are higher for legally referred clients, but the posttreatment reduction in arrest rates for legally referred clients is equivalent to that of voluntary clients (figure 1).

Using a composite measure of self-reported outcome status, the Phoenix House studies reveal that "best success rates" (no crime and no drug use) are somewhat higher for voluntary clients. Regression analyses of the same data confirm that voluntary entry on admission is a statistically significant correlate of posttreatment outcome (De Leon 1964). The magnitude of the prediction is quite small; controlling for criminal background eliminates the significance of the legal referral variable.

The multimodality DARP and TOPS studies also find that legal referral is not a statistically strong predictor of posttreatment outcomes in TCs or other modalities (Hubbard et al., this volume; Simpson and Friend, this volume). A similar relationship between outcome and time in program for both voluntary and nonvoluntary clients is also obtained from studies of European TCs (Wilson and Mandelbrote 1976; Zimmer-Hoefler and Meyer-Fehr 1966).

Adolescent Legal Referrals

Among admissions to drug-free treatment, younger clients are more likely to be legally referred than adults. For example, nearly half of all male adolescent admissions to residential and outpatient programs in the TOPS survey were legally referred (Hubbard et al. 1984). At

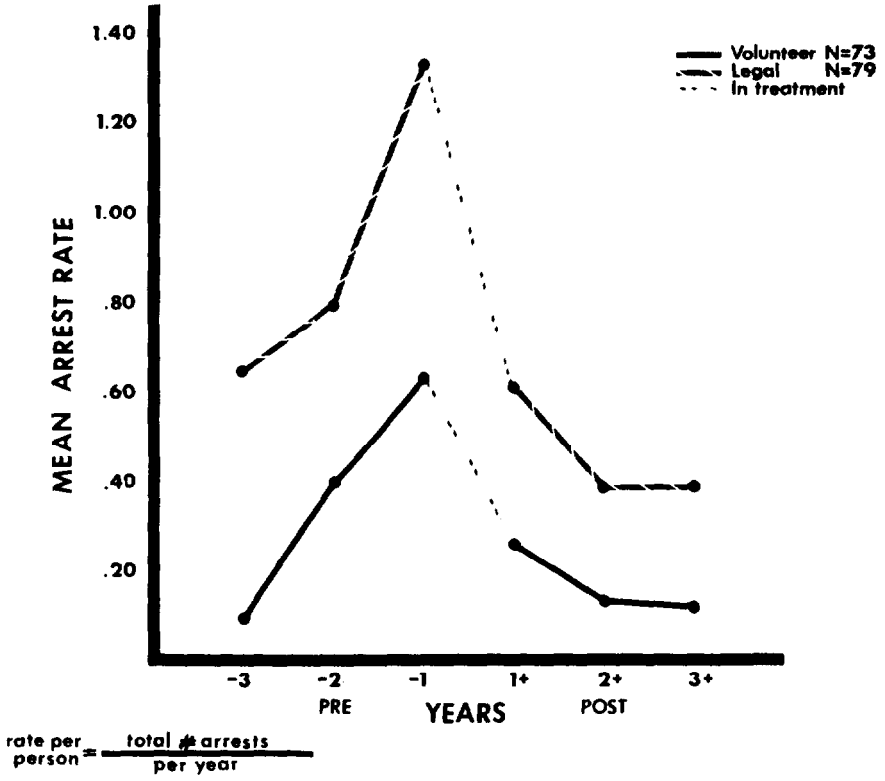

FIGURE 1. *Arrest fate for dropouts year by year, by legal status at entry (age at entry 19 and older)*

SOURCE: De Leon et al. 1979, Copyright 1979, Marcel Dekker, Inc.

Phoenix House, approximately 40 percent of the adolescent admissions are legally referred, compared with less than 20 percent of adult clients. Indeed, there are TCs that serve legally referred adolescents almost exclusively, e.g., Abraxas in Pennsylvania.

Findings are unclear for posttreatment outcomes of legally referred adolescent substance abusers. For example, outcomes in DARP and TOPS drug-free residential modalities do not differ by age; however, analyses involving the interaction of age and legal referral are not reported in those investigations. In Pennsylvania, a traditional TC study of adolescents reported outcomes only for client status at

discharge (Rush 1979). Results indicate that legal referral is not a significant predictor of discharge outcomes in TCs or in outpatient settings for adolescents.

Table 1 shows the main findings of a Phoenix House investigation of age, legal status, and outcome assessed with a composite measure of success (De Leon 1986b). Adolescent best success rates are similar to those of adults, although more unfavorable outcomes were obtained among clients under 19 years of age who had a legal status. Nevertheless, the evidence suggests that the TC exerts a considerable effect on this more antisocial group of adolescents.

Retention and Legal Referral

Considerable research demonstrates a direct relationship between retention and posttreatment outcome. For example, multivariate studies identify time in treatment as the most consistent predictor of positive outcome, even when the contribution of other client-related variables is removed (Simpson and Sells 1982; De Leon 1984; Holland 1983; Barr and Antes 1981).

Because of its obvious importance, retention has increasingly been a focus of investigation in TCs (De Leon 1985). A key conclusion from this research is that client factors in general are not strong predictors of retention. However, legally referred admissions remain significantly longer in TCs than do voluntary admissions. Similar retention findings are reported in other data systems involving TCs and other treatment modalities (Condelli 1986; Sheffet et al. 1980; Simpson and Friend, this volume; Hubbard et al., this volume: Anglin, this volume).

TC research indicates that the relationship between legal referral and retention is complex. In particular, figure 2 shows that, among legal referrals to a national consortium of TCs (Therapeutic Communities of America (TCA)), Qmonth retention decreases with age compared with voluntary admissions, for whom retention increases with age (De Leon 1980), suggesting an age/legal referral/retention interaction.

This finding is further supported in large-scale comparisons of retention in TCs (Pompi and Resnick 1987). Figure 3 presents curves for 10 TCs displaying the characteristic temporal pattern of retention described in the literature (De Leon and Schwartz 1984). Dropout is maximal in the first 30 days of treatment and declines steadily thereafter. Although the shapes of the curves are similar, the level

TABLE 1. *Success at 2 years' followup: Age and legal status (males)*

	Legal		Voluntary		Totals	
	Number	Percent	Number	Percent	Number	Percent
≤19 Years:						
Success 4	6	33.3	3	30.0	9	32.1
3	1	5.6	4	40.0	5	17.9
2	2	11.1	0	0.0	2	7.1
1	9	50.0	3	30.0	12	42.9
19-26 Years:						
Success 4	19	39.6	26	44.8	45	42.4
3	6	12.5	14	24.1	20	18.9
2	8	16.7	5	8.6	13	12.3
1	15	31.2	13	22.4	28	26.4
27+ Years:						
Success 4	4	30.8	15	33.3	19	32.8
3	1	7.7	11	24.4	12	20.7
2	3	23.1	5	11.1	8	13.8
1	5	38.5	14	31.1	19	32.8
Totals:						
Success 4	29	36.7	44	38.9	73	38.0
3	8	10.1	29	25.7	37	19.3
2	13	16.5	10	8.8	23	12.0
1	29	36.7	30	26.5	59	30.7

KEY: Success 4=most favorable (no crime and no drug use): 3=favorable (drug use, but no crime); 2-unfavorable (crime, but no drug use); and 1=least favorable (crime and drug use).

NOTE: Percents may not add to 100.0 due to rounding. Positive change from pre-treatment distribution of success index is statistically significant. The actual proportion of Individuals who changed is more clarly shown when absolute success status is ignored. Almost 84 percent of the sample had the lowest success Index (1) for the year prior to treatment. Positive change over pre-treatment levels occurred in almost 60 percent of the sample and was significant by age and legal status with the exception of the youngest legally referred clients. They showed the smallest reduction in change for clients with the lowest category.

of retention is markedly elevated, particularly in the first 30 days, for one program, in which 90 percent of the admissions are adolescent legal referrals. In the other TC programs, legal referrals constitute considerably smaller proportions of all admissions.

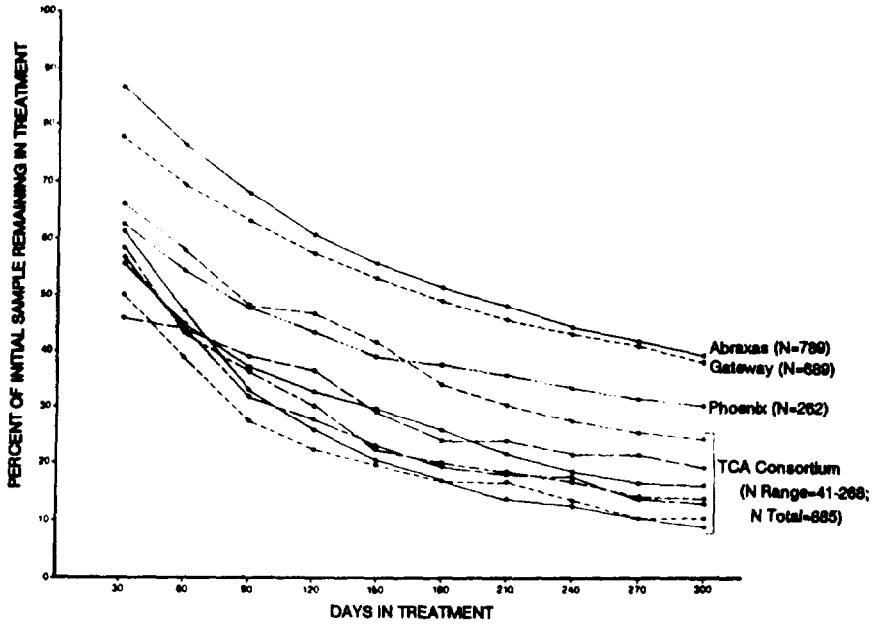

FIGURE 2. *Retention of court-referred adolescents*

NOTE: Retention cures for Abraxas (1979 to 1983 admissions); Gateway Foundation (February 1981 to June 1983 admissions); Phoenix House (January to April 1981 admissions); and seven members of a TCA consortium (February 1 to August 15.1979, admissions).

SOURCE: Pompi and Resnick 1987, Copyright 1987, Marcel Dekker, Inc.

The effects of legal referral on short-term retention appear more evident in younger clients. However, results from recent Phoenix House analyses indicate that longer retentions (1 year or more) and program completion rates (graduation) are significantly correlated with clients more than 27 years of age, legally referred to treatment (De Leon, in preparation). Thus, although legal referral is clearly associated with increased retention, age-related factors still need clarification.

SUMMARY OF MAIN FINDINGS

Outcomes

There is little evidence for differential outcomes between legally referred and nonlegally referred clients. Significant posttreatment

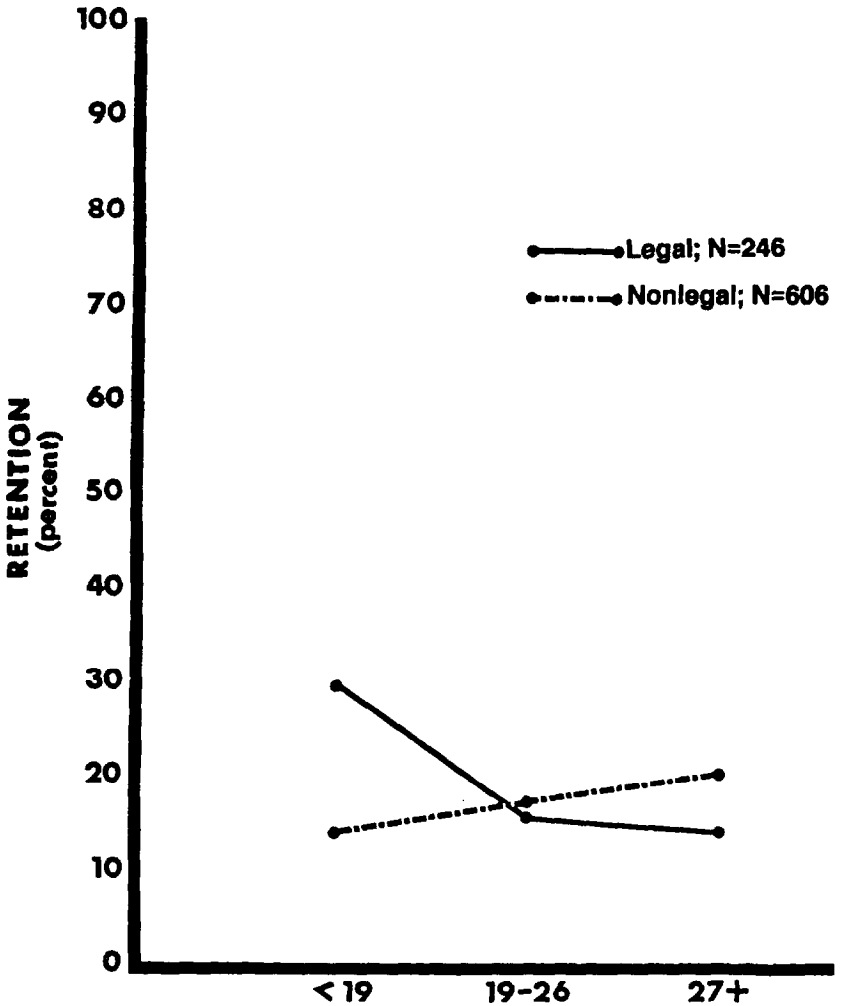

FIGURE 3. *Legal status (CODAP definition), age, and 9-month retention for all admissions (February to August 1979) to a consortium of seven member programs of TCA*

SOURCE: De Leon 1980.

improvements in criminality, drug use, and employment occur for both groups and are directly related to time spent in treatment. Some regression studies report that legal status is a significant but small predictor of higher posttreatment criminality. However, this mainly

reflects the importance of criminal background, which is correlated both with legal referral and posttreatment criminality.

Retention

Time in program is the largest and most consistent predictor of treatment outcomes; legal referral relates significantly to retention in treatment. In general, clients referred by the criminal justice system to TCs (as well as to other modalities) remain longer in treatment than do voluntary clients. Relatively more adolescents are legally referred to drug-free treatments, particularly to TCs. However, the relationship between age, legal referral, and retention needs to be clarified.

On the whole, the main findings suggest a complex relationship between legal referral and treatment outcomes. Posttreatment status does not relate directly to legal referral. Nonetheless, retention in treatment is the best predictor of outcome, and legal referral is a consistent predictor of retention. Thus, there is an indirect relationship between legal referral and outcome that appears to be mediated through retention in treatment. Research has shown that the more criminally involved client has a less favorable posttreatment outcome. The retention-enhancing effect of legal referral offsets the higher probability of negative outcomes among a number of the criminally involved clients, which may explain the similar outcomes for voluntary and legally referred TC admissions.

Legal Pressure

Several interrelated issues from research and clinical experience in TCs have confounded interpretation of the research findings on legal referral and, broadly, the efficacy of compulsory treatment. There are relevant distinctions among the terms “legal referral,” “legal status,” and “legal pressure.” The failure to make these distinctions has been an important source of variance in assessing treatment effectiveness for the criminal justice client.

Legal referral is an explicit procedure. It may be one of a variety of criminal justice procedures, e.g., parole, probation, court diversion, or sentencing stipulations, that essentially direct drug abusers to a treatment alternative.

Legal status denotes any form of legal involvement, e.g., warrants pending, case pending, arrested, in jail, awaiting trial or sentencing,

on bail, and may include the conditions of legal referral. Actually, undetermined numbers of TC admissions are legally involved, i.e., enter treatment with a legal status, but are not legally referred. Although the two terms are used interchangeably, they imply different influences on treatment entry.

A further distinction concerns the term "legal pressure." It is commonly assumed that legal referral, an action, is equivalent to legal pressure, a presumed effect. However, legal referral procedures do not assure the existence of the pressure, which is presumed to be the effective element in a compulsory process. Perceived legal pressure, or how individuals experience legal referral, is important. Those who are legally referred may not experience any discomfort over the consequences of noncompliance during treatment (leaving treatment, the certainty of reincarceration, or even being in jail). Indeed, some legally referred clients prefer jail to TC treatment.

The candidates most suitable for legal referral to drug treatment have not yet been identified through research or clinical experience. In part, this reflects the fact that the currently used dichotomy of legally referred vs. nonlegally referred is too crude a classification to capture the spectrum of addict differences, particularly with respect to perceived legal pressure. Some voluntary clients may have histories of legal involvement and may experience legal pressure indirectly. Conversely, as noted earlier, significant numbers of legally referred drug abusers may not actually perceive or experience legal pressure for compliance or change. Failure to distinguish among these subgroups of voluntary and nonvoluntary clients has introduced unmeasured error associated with the legal referral or legal status variables commonly used in research.

It is not within the purview of the present paper to detail a new system for classifying legally referred or legally involved drug abusers. Based upon the two factors of legal referral and perceived pressure, at least four subgroups of clients could be specified: legal referrals with and without actual perceived pressure; and legally involved voluntary referrals with and without actual perceived pressure. If a third factor, such as motivation (intrinsic pressure), is introduced, the number of subgroups multiplies accordingly. Clarification of these subgroup differences is important in research on compulsory treatment.

Implementation Effects

The efficacy of legal referral procedures in yielding positive treatment outcomes is also related to the fidelity of their implementation. Legally referred clients who do not perceive consistency or uniformity in the legal process may not feel pressed to comply with treatment demands.

Implementation failures can occur at any stage in the referral process. For example, the initial referral may contain ambiguities concerning the consequences or options for clients who either refuse treatment or arbitrarily leave a particular treatment program. During treatment, consistency should be maintained with respect to drug use surveillance by urine testing (ii regularity and the actions taken) or monitoring non-drug-use infractions (detection and consequences).

Generally, effective implementation requires a strong working relationship between the criminal justice and treatment systems. In particular, interaction and communication must be maintained between the two systems to maximize the rehabilitative effects. For example, legal officers must be familiar with the approach, have regular contact with clients, and routinely visit the treatment program. Programs should report regularly and promptly. Mutual agreements must be developed on conditions for clients changing or dropping out of treatment. An alliance must be forged in which a legal presence is evident, and treatment is free to carry out its mandate.

Treatment Program Variance

An identified weakness in several of the civil commitment programs initiated in the last 25 years has been the quality of treatment programs. For example, individual programs differ widely with respect to philosophy, staff experience, program resources, and training. Treatment technologies may not be explicitly described, or the relationship between the treatment model's philosophy, or perspective, and its practice is often abstract, distant, or weak. Moreover, even well-designed protocols may not be faithfully executed. Thus, program-related sources of variance have obscured the measurement of treatment effectiveness for legally referred clients.

Recovery: The Role of Legal Pressure in Rehabilitation

Clinical experience and existing research underscore the multivariate and interactional nature of behavioral change. Entire domains of

variables, much less single measures, are inherently limited as predictors of rehabilitation. It is not surprising, then, that the contribution to outcomes of one variable, such as legal referral, is minimal, obscure, or ambiguous. This can be briefly illustrated in terms of the recovery process in TCs.

The primary goal of rehabilitation is to facilitate the development of a drug-free, prosocial lifestyle. This goal is achieved through a social learning methodology that fosters maturation, skills training, insight, and personal growth.

The process of change unfolds as a continuous interplay of client factors, e.g., motivation, and treatment influences. Three stages of the process can be characterized that reflect shifts in the factors that influence treatment involvement and behavioral change:

(1) compliance—adherence to the rules and regulations of the TC to avoid negative consequences such as disciplinary sanctions, discharge, or reincarceration;

(2) conformity—adherence to the expectations and norms of the group or community to avoid loss of approval or disaffiliation; and

(3) commitment—adherence to a personal resolve to change one's lifestyle.

These stages are inclusive and interactive in that conformity requires compliance, and commitment subsumes both conformity and compliance toward achieving the personal goal of self-change. The appearance of prosocial behavior in each stage does not necessarily imply its causes or assure its stability. If the commitment stage is not attained, recovery is incomplete, and the potential is greater for relapse to drug use or crime.

Thus, the recovery process itself may be the primary source of variance affecting the measured efficacy of compulsory treatment. Nevertheless, research and clinical experience in TCs do provide hypotheses concerning the role of legal pressure in rehabilitation. Some drug abusers require external pressure to seek, remain in, and benefit from treatment. For these individuals, legal pressure is viewed as having a limited but potent role in the recovery process. Legal pressure can provide the initial force that sustains individuals through the compliance stage of treatment, permitting the influences

of maturation, therapy, and retraining that occur in the later stages of recovery.

Broadly, the above perspective on recovery can be applied to various ways that perceived legal pressure could affect individual change, both within and outside treatment settings.

Legal pressure can maintain abstinence and prosocial behavior during the period of surveillance only (duration of probation, parole, court-mandated time). In this case of compliance only, behavioral change is likely to be temporary and unstable after removal of the pressure.

Legal pressure in the form of surveillance can maintain compliance until maturational factors assume a greater influence in the acquisition and maintenance of prosocial behavior. This undoubtedly has been of major significance in some of the non-TC studies reporting positive results of civil commitment (Angiin and McGlothlin 1994).

Finally, compliance can lead to rehabilitation when legal pressure maintains compliance during the transition to the conformity and commitment stages in the recovery process.

IMPLICATIONS FOR RESEARCH ON COMPULSORY TREATMENT

The efficacy of compulsory treatment is related to implementation, client differences, and the multivariate complexity of the recovery process itself. These issues can be better understood through research in several ways.

Individual Differences

As yet, there is no typical profile of the client most suitable for a compulsory treatment referral. However, important client factors can be specified, particularly in terms of perceived legal pressure, motivation, readiness, and suitability for treatment. Research can develop criteria for classifying client differences and provide comprehensible tools for criminal justice personnel to use for identification, assessment, and referral.

Although new and appropriately designed studies are necessary to demonstrate convincingly the contribution of compulsory treatment approaches to outcomes, much information can be gleaned from further analyses of data already collected. In particular, the complex

relationships among legal referral, age, motivation, retention, and outcome can be investigated to a certain extent in existing data sets.

Improved Implementation

Effective compulsory treatment requires an integrated involvement of criminal justice systems and treatment systems. Models for developing links between the criminal justice and treatment systems must be designed and tested. Such models should stress the following areas.

Education. The existing knowledge base with respect to treatment effectveness must be disseminated to the Criminal Justice System, which needs to be informed of the various treatment modalities, the clients they serve, and their success and improvement rates.

Training. Treatment workers and criminal justice personnel, i.e., judges, correction officers, and district attorneys, must be trained to work together in referral and rehabilitation. The focus should be on mutual agreement of the goals of compulsory treatment for selected clients, particularly in terms of the role of legal pressure in the recovery process.

Uniform Procedures. Explicit and uniform procedures for referral and surveillance must be established to maintain consistency in the legal referral process.

Policy Considerations. Existing evidence suggests that treatment is effective for some undetermined number of drug offenders who are legally referred. Favorable outcomes for legal referrals appear in the three major treatment modalities of methadone maintenance, drug-free outpatient settings, and drug-free TCs. The latter modality, in particular, offers a unique alternative for criminal justice referrals. Although posttreatment outcomes were stressed in the present review, the impact of treatment is striking on all clients, voluntary and nonvoluntary, during their stay in the TC. Regardless of length of time in program, there is virtually no crime or illicit drug use while clients are in residential treatment. Given their modest costs, the self-help traditional TCs offer an extremely favorable cost/benefit alternative to incarceration.

Unlike other modalities, the TC provides long-term treatment in a 24-hour environment that attempts to change lifestyles. Its emphasis upon resocialization accords with the goals of the criminal justice

system and society in general for rehabilitating the drug-abusing offender.

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Basic Issues Pertaining to the Effectiveness of Methadone Maintenance Treatment

John C. Ball and Eric Corty

OPIATE ADDICTION IN THE UNITED STATES: A HISTORICAL PERSPECTIVE

In an era of renewed public apprehension about the spread of drug abuse in the United States, it is meaningful to review basic issues pertaining to the effectiveness of treatment for intravenous drug users for three reasons. First, heroin addiction-with some 500,000 active addicts—remains a persistent part of the drug abuse problem in the United States (Kozel and Adams 1986). Second, the fact that most heroin addicts are intravenous drug abusers, who constitute a high-risk group in the AIDS epidemic, has aroused a new level of scientific interest in this population (Drotman 1987). Thirdly, the problem of heroin/opiate addiction has a long history in the United States, so that treatment and policy issues can be placed within a historical and scientific framework.

Before considering basic treatment issues pertaining to heroin addiction, it seems worthwhile to comment upon the history of the opiate addiction problem in the United States, define opiate addiction, identify particular populations under study, and delineate what we know about the treatment of heroin addiction to provide a framework for further discussion.

The problem of opiate addiction has a long history in the United States (Terry and Pellens 1928). In 1878, Marshall (1978) reported on the characteristics of 1,313 opium and morphine eaters in Michigan. By 1918, a special committee of the Treasury reported that there were 237,655 addicts in the United States (Terry and Pellens 1928). More recently, O'Donnell and Jones (1968) investigated the origin and spread of intravenous opiate abuse and found that this route was

first utilized by U.S. addicts in the 1920s. This long history has also produced a vast body of scientific and medical knowledge about the life course of opiate addiction and its treatment (Bail and Chambers 1970; Lowinson and Ruiz 1981).

It is important to note that demographic populations at high risk for opiate addiction have differed by era and location within the United States. Similarly, for those who do become addicts, age at onset of daily opiate use and other characteristics of their addiction careers also differ by period and place of residence. Furthermore, it is significant that comparable or even greater variations in addiction characteristics and consequences have been found in other nations (Ball 1977; DuPont et al. 1979). Thus, the problem of opiate addiction differs by nation and historical period, although most physiological and pharmacological aspects of addiction, such as physical dependence, remain constant (Cooper et al. 1983; Kreek 1979).

Studies of drug addiction have usually focused on particular populations of abusers, classified specific drugs of abuse, and formulated definite scientific questions to investigate. Thus, it is necessary to indicate which population (adult males, metropolitan slum dwellers, teenage females, college students, army personnel, factory workers, prostitutes, criminals, doctors, pregnant housewives, etc.) and which drugs of abuse (heroin, morphine, PCP, cocaine, marijuana, barbiturates, etc.) are to be studied. In addition, it is important to measure frequency of use as well as to note route of administration (Ball and Chambers 1970).

Studies of heroin addicts in the United States have found that most compulsive users have both addiction and nonaddiction periods following onset of daily use of opiates (Nurco et al. 1981). Each of these addiction periods, or nonaddiction periods, commonly last a year or longer. Nonaddiction periods are often periods of incarceration. These consecutive periods of addiction, nonaddiction, or incarceration provide a frame of reference for studying the life course of heroin addiction. In this regard, the forces that cause the onset of addiction are usually quite different from those that propel addicts to continue daily abuse for many years. While the onset of heroin use commonly occurs as a voluntary peer-group recreational endeavor among inner-city youth, continuation of intravenous use leads to an adult career in which the addict is enmeshed continually in a drug abuse subculture.

Once opiate addiction has been established for a number of years, it has proved to be exceedingly difficult to reverse this process and effect a cure. Indeed, it has been stated that no treatment regimen exists that will permanently cure most opiate addicts (Ball 1972). Adults can be withdrawn from drugs in a controlled environment (i.e., hospital or prison), but most ex-addicts quickly relapse without followup services. The life course of opiate addiction is so intractable to rehabilitation because this dependency is supported by a complexity of physical, psychological, and social forces that reinforce one another. Consequently, once intravenous heroin addiction is established, the day-today pursuit of drugs becomes a way of life that is not changed easily.

THE SOCIAL AND COMMUNITY CONTEXT OF HEROIN ADDICTION

Drug addiction is learned repetitive behavior that is illegal and that quickly becomes compulsive. Drug addiction is also social behavior that commonly is learned from other abusers and is maintained by means of their support. In this sense, drug addiction is socially contagious. It is not, however, an infectious disease like AIDS, and it is not primarily a mental illness.

The 500,000 heroin addicts concentrated in metropolitan areas constitute a major social problem for the nation, because of their self-destructive lifestyle and antisocial behavior (Nurco et al. 1985). in this regard, most addicts are involved continually in crime and often find it difficult, or unrewarding, to pursue steady employment (Ball et al. 1983).

Various public policies have been advocated to cope with the problem of heroin addiction in the United States; many of these policies apply to compulsive users of other illicit drugs, as well as heroin. It seems pertinent to comment upon current policies pertaining to drug abuse because they often are advanced in conjunction with, or as substitutes for, treatment. A major public policy focuses on educating youth about the dangers of drug abuse as a principal means of controlling or eliminating the problem of drug abuse. This emphasis upon didactic or moral teaching has had only limited effect in changing adolescent peer-group behavior and is only one aspect of prevention. However, it has been found that there are three discrete domains that need to be reached in prevention: knowledge, attitudes, and behavior (Grant 1986).

Countervailing institutional forces at work in society have limited the impact of education. These forces include societal influences that denigrate family life, religious values, and community responsibility, while they extol drug abuse and other forms of deviant behavior.

The family also has a crucial role to play in the prevention of drug abuse among children. However, many children do not have responsible parents and, consequently, they are deprived of suitable early socialization. In this regard, there are not only orphans and unwanted children, but parents who are themselves opiate addicts, criminals, or prostitutes (Goldstein 1979).

A word about the inner cities is in order. These extensive, yet forgotten, neighborhoods are a principal breeding ground of heroin addiction. In a very real sense, addiction is a community problem, rather than merely an individual problem (Chein et al. 1964). This is because addiction is maintained and spread by drug-using cohorts from generation to generation in metropolitan slum areas (Mieczkowski 1986). Furthermore, the fact that minority group members constitute a major portion of inner-city dwellers only exacerbates the problem of awakening public interest and support. So the scope and complexity of the slum problem remain intact, and the poorer areas of our cities continue to be ignored.

The role of law enforcement is crucial to any policy for controlling heroin addiction. As with crime, it is necessary to develop policies for reducing the spread and continuation of the problem. In this regard, it is important that law enforcement efforts and programs be integrated with community needs and interests.

Treatment alone cannot be expected to contain the problem. Support for treatment proclaims that a legitimate human need exists and this need has public support (Jaffe 1979). It follows from what has been stated that no one approach or single institution will be sufficient to meet the heroin addiction problem in the United States. Rather, a coordinated societal approach is necessary, in which increased resources will be organized to meet prevention, education, and treatment needs of communities, occupations, and other populations.

TREATMENT SERVICES PROVIDED TO METHADONE MAINTENANCE PATIENTS IN NEW YORK, PHILDELPHIA, AND BALTIMORE-RESEARCH FINDINGS

When consldering the role of treatment for opiate addiction in the United States, it is pertinent to delineate the treatment services commonly provided In methadone maintenance programs for various types of addicts. Thus, the question of what types of patients profit from methadone maintenance treatment can best be answered by analysis of both patient characteristics and program characteristics. Inasmuch as the analysis of treatment regimens and services delivered has been largely Ignored, it seems appropriate to present research findings pertaining to methadone maintenance treatment services.

Research pertaining to the scope, frequency, and variation in treatment servicea provided to methadone maintenance patients was obtained as part of a three-city National Institute on Drug Abuse (NIDA) supported study of program effectiveness. Data collection included confidential onsite interviews of each program's staff, indepth compilation of data from pharmacy and other clinic records, and face-to-face patient interviews. Detailed program data were collected at the clinics by four project staff members, which included the authors, during a 2-year period (1985 to 1986).

The six methadone maintenance programs selected for study included about 1,900 addict patients. The treatment services can conveniently be classified under four headings: (1) attendance for oral methadone medication; (2) urinalysis to detect illicit drug use; (3) counseling services; and (4) medical services provided (table 1).

Attendance requirements at the six programs were quite strict. Recent admissions and patients without take-home privileges were required to attend the clinic every day—either 6 or 7 days per week, depending upon whether or not the clinic was open on Sundays. During this daily visit, patients were given an oral dose of methadone by the dispensing nurse or pharmacist. At this time, patients were also checked for obvious intoxication, provided an opportunity to arrange for formal counseling services or medical services, and monitored for treatment progress.

About 54 percent of the 1,898 patients earned take-home privileges; that is, they were given one or more doses of liquid methadone in bottles for consumption at home on days when they did not attend the clinic. For those with take-home privileges, the mean number of

take-home medications was three. Most of these patients then attended the clinic three or four times per week. The average daily attendance rate at the six clinics was 94.2 percent. Only 5.8 percent of the patients missed their scheduled daily attendance for medication.

TABLE 1. *Fourteen treatment services provided to 1,898 outpatients at 6 methadone maintenance clinics*

Type of Treatment	Frequency of Service
1. Attendance for Oral Methadone Medication	
Average daily attendance rate at clinic	94.2 percent
Mean days of scheduled attendance per week	5.4 days
Mean methadone dosage	45.6 mg.
2. Urinalysis to Detect Illicit Drug Abuse	
Mean number of urine specimens "dropped" per month	4.9
3. Services Provided by 55 Counseling Staff	
Patients with designated counselor	99.6 percent
Mean number of counseling sessions per month	2.2
Mean time of individual counseling sessions	36.5 minutes
Patients also receiving group counseling	22.2 percent
Receiving vocational services, in month	2.5 percent
Receiving educational services, in month	1.9 percent
4. Treatment Provided by 44 Medical Staff	
Patients receiving medical treatment, past 90 days	41.8 percent
Patients receiving physical exams, past 30 days	15.6 percent
Receiving other medication, past 30 days	4.9 percent
Receiving psychotherapy in past 30 days	0.2 percent

A second major aspect of methadone maintenance treatment is urinalysis. All patients were required to provide urine samples on a regular basis. Commonly, this was done once a week on a random basis, but in some programs it was done more often. On the whole, 4.9 urine specimens were obtained per patient per month. The purpose of this urine screening was to monitor illicit drug abuse (both opiates and nonopiates) and to check whether patients were taking their take-home methadone.

Counselors represented the largest clinic staff group, and they provided numerous treatment services to methadone patients. Each patient was assigned a counselor at admission who had primary responsibility for supervising the patient's treatment progress. Counselors provided regular individual sessions, with an average of 2.2 sessions per month, each lasting 37 minutes. In addition to these individual sessions, 22 percent of the patients attended group counseling sessions.

Although the counselor's principal roles were individual face-to-face conferences, daily monitoring with brief contacts, attendance checks, and referrals, they also provided a variety of other services. For example, 7 percent of the patients attended Narcotics Anonymous or Alcoholics Anonymous meetings at the clinic on a monthly basis, 2 percent received family therapy, 2 percent attended educational services, and 2 percent received vocational services.

When counseling was contrasted with educational and vocational services, only 4 percent of the patients received either educational or vocational services. Staff qualified to provide these services were not available in most programs.

The 44-member medical staff at the 6 clinics included 11 physicians, 5 physicians' assistants or nurse practitioners, 25 dispensing nurses, and 3 pharmacists. Since many of these staff were part time, their full-time equivalency (FTE) was about half that of the counselors—29.2 FTE versus 53.0 FTE.

The treatment services provided by the medical staff consisted primarily of dispensing methadone, conducting physical examinations, and providing general medical care. Thus, most of the nurses', as well as most of the pharmacists', workday was spent dispensing methadone. In addition, 16 percent of the patients had had physical exams in the past month, while 42 percent had received medical treatment in the past 3 months. Only 0.2 percent of the patients had

received psychotherapy in the past 30 days, and only 5 percent were on prescribed medication other than methadone.

A review of the total treatment services provided to patients at the six programs supports the following conclusions. First, clinic attendance and monitoring, which is focused upon regular scheduled methadone dispensing, provides an ongoing network of contacts and services that has a daily effect on patients.

Second, urinalysis fulfills an important function. It provides an objective test of compliance with treatment goals and serves as an important measure of patients' progress.

Third, the important role of counselors and nurses in the clinics must be emphasized. These two groups provide the daily contact as well as most of the individual care and rehabilitative services that patients receive.

Fourth, marked variations were found among the six clinics in medical staffing patterns and services provided (Ball et al. 1986). Some programs had extensive medical coverage, while others had almost none. The effect of these differential medical services upon patients' outcome remains to be investigated.

The Effect of Legal Pressure on Admissions to Methadone Maintenance

A cohort of male patients representing 104 admissions to the 6 programs was examined. Of these admissions, 31 were under legal pressure (probation or parole) and 73 were not. These patients were interviewed at admission and then reinterviewed a year later.

With respect to background characteristics, the compulsory treatment patients (those under legal pressure) were more likely to be separated or divorced (48 percent versus 27 percent), had more criminal convictions (7.0 versus 3.6), had spent more time in prison (51 months versus 18 months), and had more years of regular barbiturate abuse (2.2 versus 0.6). However, the two groups did not differ significantly with respect to age, race, employment history, age at onset of opiate use, years of opiate use, or prior treatments for drug abuse.

The two groups of patients were quite similar at admission with respect to their need for treatment, as measured by the Addiction Severity Index (ASI). The only significant composite score

differences on the ASI scales (i.e., medical, employment, legal, family-social problems, drug abuse, alcohol abuse, and psychiatric problems) were drug abuse and crime. The compulsory treatment patients were lower on the drug scale and higher on the legal problems scale.

The two groups appeared to differ with respect to treatment retention, although this difference was not statistically significant. Thus, only 19 percent of the compulsory patients were in treatment a year later, compared with 40 percent of the other patients. These results indicate that the majority of criminal addicts who are under legal coercion do not remain in methadone maintenance treatment for 12 months. When such rapid dropout occurs, it seems that it may be an indication that the patient treatment match was inadequate or that the treatment modality was inappropriate.

SEVEN BASIC: ISSUES PERTAINING TO THE TREATMENT OF HEROIN ADDICTION IN THE UNITED STATES

A first issue pertains to the causes of heroin addiction in the United States. Clearly, there are numerous causes and combinations of causes. A considerable body of research has addressed this issue (Nurw 1979), and it has been reported that numerous factors promote heroin use (e.g., peer-group friends who are addicts, residence in metropolitan slums, and prior delinquency), while others inhibit such use (e.g., non-drug-using friends, stable family life in better neighborhoods, as well as the absence of delinquency). With no single cause of heroin addiction, there is no simple or easy solution to this social problem. As noted previously, epidemiological findings suggest that populations at risk for opiate addiction change by historical period, nation, and locale so that causal factors might also vary. This is not to maintain, however, that significant causal factors cannot be identified (e.g., drug-abusing peers and residence in a metropolitan slum community).

A second issue pertains to whether or not education, religion, law enforcement, or, indeed, any single institution can solve the problem. The answer is no! None of these institutions has been able to stem the tide of heroin addiction, much less eliminate the problem. As stated, each of these institutions and others (mass media, sports, and recreational enterprises) has a role to play. However, there is a lack of consensus and coordination among these institutions.

A third issue pertains to the current role of treatment as a national policy. It appears that there is an ambivalent attitude toward the

treatment of heroin addiction and, indeed, toward the treatment of drug abusers in general. On the one hand, a belief in rehabilitation and reform is proclaimed, and, therefore, some treatment is provided. On the other hand, the problem of intravenous heroin addiction is denied, so an intellectual dichotomy persists.

A fourth issue relates to the effectiveness of methadone maintenance. It has been noted that all of the major treatment modalities for heroin addicts are successful for some patients. In this sense, methadone maintenance, therapeutic communities, psychotherapy, group counseling, and individual therapy are all effective. The question now becomes one of ascertaining which treatment modalities are appropriate for which types of patients in which types of neighborhoods or communities (McLellan et al. 1982). But the issue of what constitutes successful treatment for heroin addicts is not simple and straightforward (Tims and Ludford 1984). Getting addicts completely off opiates, or all illicit drugs, is only one criterion of success. Their criminal behavior, psychiatric difficulties, or other aspects of their lives cannot be ignored. As a consequence of diverse lifestyles and attendant problems, it is necessary to measure improvement in a number of respects. The most widely used measurement instrument for ascertaining addicts' need for treatment and progress in treatment, the ASI, uses seven specific areas of functioning: medical status, employment, alcohol abuse, drug abuse, crime, family/social life, and psychiatric status. Within this context, treatment effectiveness is based upon demonstrable improvement in each of these areas. To the extent that a treatment modality produces improvement, it is more or less effective. Consequently, treatment effectiveness is not a matter of success or failure, but a question of how much improvement, for how many patients, over how much time.

The fact that many methadone maintenance patients stay in treatment for extended periods of time (a sizable number continue for 3 or more years) raises the issue of whether or not these programs seek to cure addicts by making them completely abstinent. The rationale for methadone maintenance treatment is founded upon three fundamental objectives: stabilization, improvement, and cure (Dole and Nyswander 1965; Dole and Joseph 1978). Each of these objectives is an acceptable outcome for some patients. Methadone maintenance programs are able to effect significant improvement for most patients who remain in treatment. Thus, stabilization of an improved way of life generally occurs after 2 years of treatment.

A fifth issue, whether prolonged methadone maintenance treatment tends to institutionalize patients and promote a welfarelike dependency, is crucial to public policy deliberations. Three observations seem appropriate. First, the 500,000 addicts pose numerous problems for their communities and sometimes seem to threaten the very fabric of society through their self-destructive predatory acts and criminal behavior. The addicts do exist, and therefore, long-term treatment must be considered. Second, most addicts who enter methadone maintenance programs improve (especially with regard to a reduction in drug abuse and criminality) while they remain in treatment. In this sense, methadone programs are effective and are a major benefit to society. Third, the degree of institutional dependency involved in outpatient methadone maintenance treatment is minimal; most patients make two to five brief daily visits to the clinic per week, and the number of visits is decreased after the first year or two.

The effectiveness of compulsory methadone maintenance treatment for heroin addicts represents a sixth basic issue. The consideration of what types of criminal addicts might be suitable for admission to methadone maintenance treatment presents a dichotomy of goals. The goal of containing the most dangerous or difficult criminals and thereby removing a threat from society is one objective. Conversely, the goal of effecting change and rehabilitation among criminal addicts represents something quite different. On the basis of present knowledge, a policy of compelling hardcore criminal addicts to attend existing methadone maintenance programs seems ill advised, since the chances of effecting positive change seem minimal, while the likelihood for program disruption seems high.

In addition, it would probably be necessary to establish separate specialized clinics (or sections in clinics) to serve criminal justice clients if they are mandated or court ordered to methadone maintenance treatment. This course of action would follow the growing recognition that there is a need for specialized treatment services for various addict or ex-addict populations (e.g., females, adolescents, those at highest risk for AIDS, the aged, and stable working adults).

Establishing and maintaining viable links between treatment programs and the criminal justice system will be extremely difficult to implement. Apart from inherent differences in philosophy, staff training, objectives, and day-today operations, treatment programs do not currently have staff and program resources to implement a meaningful policy of coordination and mutual support.

A seventh possible issue is whether other modalities are more or less effective than methadone maintenance in treating opiate addicts. Perhaps a more appropriate question is how to determine the particular effectiveness of each treatment modality for specific types of patients.

CONCLUSION

The problem of heroin addiction in the United States was discussed from a historical and sociological perspective, with emphasis on recent influences that have awakened concern about its scope and consequences. The role of methadone maintenance treatment in addressing the problem of heroin addiction in the United States was considered. It was concluded that methadone maintenance can be effective, especially with respect to reducing illicit drug use and crime. The question remains, however, as to which types of patients can (and cannot) be treated successfully. In the present context, this raises the issue of whether compulsory treatment will be effective for persons involved in methadone maintenance treatment.

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ACKNOWLEDGMENTS

Supported by the National Institute on Drug Abuse Grant number 51-RO1 DA03709-61.

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Civil Commitment—International Issues

Barry S. Brown

INTRODUCTION

The effort to apply cost-effectiveness analysis to civil commitment procedures, as called for in this review, points to a central concern that civil commitment has posed for many. In developing effectiveness studies of any type, it becomes necessary first to consider the objectives of the interventions and then to construct outcome measures appropriate to those objectives. In the case of civil commitment procedures, the community institutes administrative or judicial procedures, as permitted under civil law, to contain and modify behaviors that the society finds inappropriate, typically dangerously inappropriate. This suggests that a major, if not the major, effectiveness measure for civil commitment procedures is the reduction of disturbance in a community associated with the offending behaviors. In that spirit, civil commitment procedures, as they relate to drug abuse, have been more largely concerned with maintaining or achieving a societal homeostasis than have other drug abuse treatment procedures. While most would agree that all drug abuse treatment, and arguably all forms of public health care, have as an objective the protection of society in addition to the permitting of individual well-being and accomplishment, a weighting in the direction of societal protection appears particularly significant in the case of civil commitment practice. Costs then become proportional to the community's felt need for social control and the potential societal gains seen with the achieving of that control.

Those costs may be dear if the societal gains are deemed sufficiently great. Thus, Mussa Hatam, the Malaysian Deputy Prime Minister, could explain that civil commitment and enforcement strategies had become necessary in his country because the drive toward

modernization and accompanying economic prosperity was leading a significant minority of youth to drug abuse or, and also highly undesirable, toward an excess of religious zeal (Hatam 1985). Thus, for Malaysia, some level of youthful deviance, in tandem with stringent enforcement measures and a program of compulsory treatment were seen as tolerable costs in paying for the nation's economic well-being. More commonly, costs are measured in the toll potential for civil liberties since civil commitment can permit detention for inappropriate behaviors without providing legal counsel, judgment by one's peers, or witnesses for one's defense (Porter et al. 1986a).

Little wonder that Bejerot (1983) and Webster (1986) argue that democratic countries cannot move massively against drug abuse without clear evidence of strong public support. Van Bilsen and van Ernst (1986) argue that, from the standpoint of their clinic in the Netherlands, the marshaling of support to achieve such an objective is unnecessary. They argue that behavioral change is potential within the interaction of therapist and client and that controlled use of drugs—including heroin—need not threaten the larger society. van de Wijngaart (1988) notes that addicts are themselves ambivalent about the use of heroin as opposed to methadone maintenance, and that the Dutch must remain open to different strategies for coping with addiction.

Perhaps with those assessments in mind, Webster (1986) argues, with somewhat Machiavellian intensity that:

> For a major intervention program to be successful, especially one which places heavy reliance upon the use of compulsion . . . . First, the problem must be isolated and perhaps enlarged: *it may even have to be created in certain instances* (italics added). Public interest has to be won and the imperative need for a solution must be propagated. Second, a remedy must be offered and projected through the media. It is worth noting that the inherent logic of the plan may be a relatively unimportant ingredient. . . it is helpful to be able to project the ideal to the public that the plan is humane, or. . . that it is decidedly in the public interest. . . . The point is that the public must be induced to share the rationale which itself must be simple and straightforward . . . . (Webster 1986 p. 134)

In a real sense, Webster (1986) and Hatam (1985) argue that civil commitment can be justified where the level of risk to the society at large, as posed by a health-care issue, is of such magnitude as to warrant a use of social control or quarantinelike strategies. For Webster, that risk is posed to societal maintenance; for Hatam, that risk is posed to societal progress.

In fact, the laws of a substantial proportion of countries provide for civil commitment procedures. Of 43 countries surveyed by Porter et al. (1986a), 27 provide for civil commitment under selected conditions. In addition, 47 countries are parties to the 1971 Convention on Psychotropic Substances, a treaty which holds, in part, that each government may mandate treatment either as an alternative to conviction or punishment or in addition to conviction or punishment (Noll 1977).

GROUNDS FOR COMMITMENT

The rationales used to implement civil commitment procedures differ markedly and are associated with their legislative bases—whether they are included under mental health legislation or under legislation specific to drug abuse. In general, civil commitment under mental health legislation requires evidence of psychiatric impairment involving (1) threat to others; and/or (2) threat to self; and/or (3) inability to care for oneself. Countries with mental health civil commitment legislation are likely to include provision for commitment both for threats to others and to self. In this regard, German, Japanese, and Somalian laws provide for civil commitment where the drug-related disorder constitutes an imminent threat to public safety or where the individual poses a danger to his/her own life and health. Other countries operating under mental health legislation specify only the existence of psychiatric disturbance without elaboration of threat (Bangladesh) or emphasize the individual's inability to provide for himself/herself and the need for supervision (Trinidad and Tobago).

Where civil commitment is covered under legislation specific to drug use, as is the case in 15 of the 43 countries surveyed by Porter et al. (1986a), the rationale for civil commitment can be limited to evidence of dependence or addiction (Mexico, Columbia, Peru, Thailand, and Malaysia) or may include reference to the threat posed to others and/or to the need for treatment (Argentina, Italy, Australia, and Sweden).

of the 15 countries with drug legislation, 11 also use mandatory reporting of drugdependent persons (Porter et al. 1986b). In 10 countries, responsibility for reporting is vested in medical or law enforcement personnel and, in one instance (Burma), the individual is required to report himself/herself to the authorities.

Registration has several purposes. In Burma, a self-reported addict can be remanded to the nearest medical treatment center. After treatment, that person's name may be removed from the central registry. Registration in Hong Kong is used as an epidemiologic device and as a means for evaluating the government's treatment programs. Thus, Hong Kong's registry is used to monitor trends in drug use and in the characteristics of the drug-using population, as well as treatment reentry and the individual's functioning at time of government agency contact. Columbia's national registry is used to chart trends in illicit drug traffic throughout the country, while Pakistan's registry was actually used, in part, to provide opium to a portion of the addict population. Specifically, opium addicts, 25 years of age and older, could obtain opium ration cards from the Civil Surgeon of Karachi, Pakistan, entitling them to purchase opium for personal use from their locally authorized opium vendor.

WHO REQUESTS CML COMMITMENT FOR DRUG ABUSE?

Civil commitment applications may be made by the following 5 groups in the 27 countries identified by Porter et al. (1986a) as providing civil commitment:

(1) Family or community members, i.e., "significant others," were frequently cited. These individuals typically include spouse or near relatives but may extend to a business partner (Australia), to members of the worker's collective (Hungary and the Russian Soviet Federal Socialist Republic of the U.S.S.R.), or to any person in the community when the individual creates a disturb ance for his/her neighbors (Argentina).

(2) Private or public health-care providers may be required to advise the government of known drug-dependent persons. In Mexico, for example, the physician must report cases of drug addiction to the Ministry of Health and Welfare within 8 days of seeing the individual.

(3) Social service agencies may also have responsibility for implementing civil commitment processes. In Malaysia, a social welfare officer may apprehend an individual suspected of drug dependence. However, they must then present that person to the local magistrate within 24 hours.

(4) The drug-addicted individual may also apply for civil commitment.

(5) Law enforcement agencies or governmental authorities are frequently empowered to initiate civil commitment procedures. In some instances, the police officer must be of comparatively high rank to institute procedures (Australia and Malaysia): in others, power is vested in the public prosecutor (Hungary) or a comparable legal authority (Japan).

Frequently, of course, countries provide more than a single. method for the initiation into civil commitment procedures.

REVIEW AUTHORITIES

There are three types of review authorities which decide if there are sufficient grounds to justify civil commitment. Again, different authorities frequently act in concert.

(1) Courts are typically given the primary responsibility for determining appropriateness of civil commitment procedures. Argentina provides for defense counsel to make certain that no other provision for care can appropriately be made for the addict and, if commitment is ordered, to make certain that commitment is not for any longer than “absolutely necessary.” In Nova Scotia, a justice of the peace or police magistrate may remand the addict to detention and treatment in any hospital, jail, or place of detention in the Province.

(2) An existing governmental agency or a specially created governmental agency may be assigned jurisdiction over civil commitment practices. In Burma, the Drug Addicts Registration and Medical Treatment Supervision Board has been constituted to oversee the compulsory treatment of addicted persons. In Japan, the governor of the jurisdiction exercises that responsibility, and in Singapore the Director of the Central Narcotics Bureau acts in cases of civil commitment.

(3) In some instances, the reviewing authority is a medical agency acting alone. In Mexico, the Ministry of Health and Welfare may require drug treatment; in Tunisia, authority is vested in the Commission on Drug Dependence, a board of three physicians acting on behalf of that nation's Secretary of State for Public Health.

In 24 of the 27 countries with compulsory civil commitment, medical examinations were required. In several instances, those examinations need not, by law, include medical personnel but do need to involve an appraisal of the individual's condition. In some instances, second and even third medical opinions are required (Australia and British Columbia).

TREATMENT PROGRAMMING

Treatment methods or requirements may be stated in law and/or in ministerial regulation and directives. As might be expected, the specifics of treatment selection and administration are the responsibilities of local treatment agencies and authorities. Nonetheless, the law may specify the existence of inpatient, residential, and outpatient facilities (Australia); institutionalization (Hungary): or may specify institutionalization only if outpatient treatment is unsuccessful (Italy and Iraq).

In terms of treatment services, some legislation provides for a comparatively wide range of treatment activities by naming the services to be provided. For example, Thai law provides for education, training, aftercare, and social reintegration as part of the rehabilitative process. German (Hamburg) law includes medical and psychosocial counseling, aftercare, social welfare assistance, and medical services. Finnish law provides for individual counseling, family counseling, medical services, continuing surveillance, and an elaborate program of aftercare. The aftercare program includes, in part, contact with prosocial companions, developing prosocial leisure pursuits, and providing housing and job assistance.

Most statutes are considerably less explicit in describing treatment services. Some specify detoxification only (Tunisia and Singapore) or detoxification and unspecified rehabilitative services (Peru). Others vaguely refer to services in such terms as rehabilitation or medical care (Indonesia and Burma), while still others stipulate the process for individuals to get treatment. For example, Malaysian law specifies that the magistrate may order the individual to a

rehabilitation center for a period of 6 months or to community supervision by a social welfare officer for 2 years. In some instances, laws provide broad outlines for treatment services and clarify responsibility for the provision of services, e.g., Mexican law gives to the Ministry of Health and Welfare responsibility for the development and promulgation of treatment standards, issuance and dissemination of a directory of drug abuse treatment facilities, and consultation regarding referral to treatment programs, etc.

In other instances, statutes specifying treatment reflect societal concerns or values that go beyond the immediate issue of drug abuse. Hungarian law stipulates that, during treatment, the institutionalized person will forego rights and obligations associated with membership in the workers cooperative. Additional language specifies that the individual will be assigned appropriate work within the institution and may be coerced to work but must be remunerated for that work. Swedish law provides that care must be based on respect for the individual's self-determination and privacy and must, as far as possible, be planned and conducted in partnership with the individual.

LENGTH OF STAY

Laws governing the length of time an individual can be held in treatment vary dramatically. Several countries set maximum periods for stay, frequently with provision for an additional period contingent on behavior in treatment—but again with a specified time limit. At one end of the continuum, Australia provides for 7 days, with the medical officer capable of adding an additional 7 days. German (Hamburg) law provides for a stay of up to 1 year. Finnish law provides for a stay of up to 1 year, unless the individual has been in treatment during the preceding 3 years, in which case he/she may be detained for 2 years. Hungarian law provides a maximum of 2 years. Russian law (Russian Soviet Federal Socialist Republic of U.S.S.R.) provides for detention for up to 10 years, with the capacity to add up to 1 additional year if it is determined that treatment has been evaded. Swiss law provides for commitment of drug abusers for up to 3 years and for the alcoholic until such time as he/she is no longer a threat to the community. Malaysian, Thai, and Singaporean laws, often seen as comparatively restrictive, each provide for up to 6 months detention, with additional periods of 6 months each. In Singapore, 6-month periods of detention may be added to reach a combined maximum of 3 years. Of the 15 countries with civil commitment legislation specific to drug abuse, 8 do not specify the length of stay.

REVIEW PROCESS

Periodic reviews of individuals' functioning while committed may be provided by specially constructed review bodies, or by existing (and typically judicial) review bodies. In Japan, the Narcotic Addiction Examination committee is empowered to recommend to the governor of the jurisdiction shorter or increased hospital stay. In Singapore, the Director of the Central Narcotics Bureau or the specially appointed institutional treatment review committee may discharge *or* transfer detainees. In Thailand, the Secretary General of the Narcotics Control Board determines whether an additional period of commitment beyond the initial 6 months is required. In the Soviet Union, Germany, and the United States, courts are empowered to conduct reviews.

Review Procedures may be automatic at certain time intervals (every 6 months in Bavaria and every 3 months in Italy) and/or they may be instituted after submission of a request by the detainee, concerned relatives (Norway and United States), or by the treatment program director (British Columbia, Canada). Again, in most instances, there is no provision for periodic review of the detainee. In 8 of the 15 countries with drug abuse civil commitment procedures, there is no provision for periodic review, according to data from Porter et al. (1986a).

Of the 32 governmental jurisdictions in 27 countries with provisions for civil commitment under legislation governing mental health or substance abuse issues, 9 make no provision for length of detention, appeal, or review procedures.

DISCHARGE FROM COMMITMENT

Discharge is based on the period of commitment coming to an end or on treatment conclusion. The latter instance may involve referral to the courts or other government agencies or officials or may be taken by the treatment provider independently. Thus, in Italy, the treatment center may advise the court that an individual no longer needs treatment, and the individual is released. In Iraq, the psychiatrist in charge of a case may discharge an individual at any suitable time. In Norway and Australia, only the medical superintendent decides on the individual's release. In some instances, provision is made for continued community supervision. In Malaysia, individuals are supervised by the social welfare officer for 2 years. If the individual fails to comply with all supervision requirements, he/she can be

recalled to treatment. If the individual does not then return voluntarily, he/she can be arrested and returned for a period up to 8 months. In Switzerland, supervision may extend for 2 years. In Finland, individuals may be discharged prior to the 1-year period provided in Finland's civil commitment legislation; however, surveillance is also provided for 1 additional year or longer if deemed appropriate. Moreover, if the individual under surveillance continues to use illicit drugs, he/she Can then be returned to treatment for the remainder of the year originally assigned.

Again, 5 of the 15 countries with civil commitment legislation specific to drug abuse are mute on the issue of discharge procedures. In addition, the same 9 of 32 governmental jurisdictions make no provision either for length of stay, appeal, review procedures, or discharge procedures.

Porter et al. (1986a), reporting on behalf of the World Health Organization (WHO), made the following recommendations to member nations regarding civil commitment:

(1) persons in need Of short-term emergency commitment for incapacitation due to drug dependence should be immediately released from detention on completion of treatment, i.e., of detoxification;

(2) "Compulsory civil commitment (for other than emergency Care) is justified Only when an effective treatment programme, as well as adequate and humane facilities, are available";

(3) "the period of confinement should be limited . . . and a person's involuntary status subject to periodic review";

(4) "the person concerned should be afforded certain substantive and procedural rights during the commitment proceedings," e.g., "timely judicial hearing . . . counsel . . . a standard of proof," etc.

Porter et al. (1986a) also recommended that the civil commitment process and associated treatment programming be a subject for action by the relevant WHO interministerial coordinating committee.

EFFICACY OF CIVIL COMMITMENT PROCEDURES

One can argue that the widespread use of drug abuse civil commitment procedures represents an expression of considerable confidence in treatment programming. By focusing our treatment expertise, a significant impact can be made on a country's drug abuse problem. Admittedly, other explanations are possible. Civil commitment procedures may also be a strategy for reducing pressure of the judicial system and correctional facilities, while guaranteeing the continuing surveillance of individuals who constitute some level of threat to the community. Nevertheless, the emphasis on treatment demands an effort to assess the efficacy of treatment services provided under civil commitment. Unfortunately, such study, in terms of the several countries providing for civil commitment, is almost unknown; Most are content to maintain records of admissions, dropouts, and periods of retention (Anti Dadah Task Force 1985; Narcotics Control Board 1984). Others report data which are largely, or solely, anecdotal in nature.

Babaian (1979) describes the virtual eradication of drug abuse in the Soviet Union following the October Revolution. He reports that cocaine and other drugs were widely used in major cities while opium smoking was common in Central Asian regions of the U.S.S.R. under czarist rule. He ascribes the disappearance of drug abuse largely to the creation of new social conditions after the Revolution. In addition, he believes that the imposition of severe penalties for lawbreaking related to preparing, selling, or using narcotic drugs was probably useful. When addicts are discovered in the Soviet Union, they must be registered immediately and then are divided into those who may be treated voluntarily and those who will need to be treated against their will. The first stage of treatment is a period of at least 60 days inhospital care followed by an extensive period of outpatient care using a complex of "narcological" services. The capacity to rehabilitate even unwilling addicts is viewed by Babaian (1979) as essential to his country's progress in this area.

In a similar fashion, Marek and Redo (1978) argue that compulsory drug abuse treatment has given very positive results in Poland. They cite a Polish-language study that suggests 3 months of treatment as sufficient. In Poland, as in several countries, compulsory treatment may also be provided in a correctional facility. The authors emphasize the use of a drug abuse program. They also place reliance on treatment and rehabilitation rather than punishment. Although they do not cite treatment effectiveness data, the authors present survey

and estimate data regarding drug abuse in Poland and cite Polish language journals which report treatment effectiveness.

Reports of the efficacy of restrictive programming in containing drug use routinely cite the actions taken by Japan and by the People's Republic of China. Bejerot (1983), McGlothlin (1980), Morimoto (1957), and Nagahama (1968) all report on the national campaign organized in Japan to contain that country's postwar epidemic of amphetamine abuse. It was estimated that perhaps 2 million Japanese were involved in amphetamine abuse, with about a quarter of those using amphetamines intravenously. Harsh penalties were imposed: 3 to 6 months for possession of amphetamines, 1 to 3 years for drug sales, and 5 years for illicitly producing amphetamines. After the program was initiated, arrests for amphetamine offenses dropped from 56,000 to 271 in 4 years (1954 to 1958), and the epidemic was effectively over. McGlothlin (1980) suggests that the Japanese situation points out the success of a country's restrictive policy in a situation involving intensive public education, a homogenous population, and a culture with a tradition of regard for authority. Similarly, Bejerot (1983) points to broad political agreement on the wisdom of the Japanese drug policy.

In China's anti-opium campaign (Lowinger 1977), efforts were made to link that campaign to other popular reforms, notably land reform and the growing of much needed food crops. In addition, the opium importer was characterized as an enemy of the people, i.e., of the State. The importing of opium was described as an imperialist approach to destroying the Chinese nation. Massive educational programs were organized involving 1-hour-a-day discussions which linked political and health topics and concluded that those topics were of national consequence. Specifically, on June 3, 1951, Anti-Opium Day was proclaimed in Canton, and over 10,000 persons assembled in a mass meeting. In conjunction with the suppression of opium growing, compulsory registration of opium addicts began, as did the treatment of opium addicts in urban areas. In rural areas, the treatment was reportedly self-imposed detoxification. Harsh penalties were reserved for individuals identified as major dealers; much lighter penalties were assessed for lower level members of opium manufacturing and distribution gangs.

The Chinese action is usually described as demonstrating the adoption of a popular restrictive drug abuse program as part of a well orchestrated uprising against opium use, where that opium use was characterized as a pernicious problem serving foreign interests. In this

assessment, the drug abuse policy was part of a larger political action that demanded both individual and national commitment. As in Japan, the goals were achieved in a remarkably short period of time, largely between 1951 and 1953, and in a country with a 300-year history of opium smoking and a population of 20 million opium smokers at the campaign's inception.

McGlothlin (1980) provides the most rigorous analysis of the impact of a restrictive national policy directed against drug abuse. McGlothlin also points to the characterization of threat posed by drug abuse to the larger society—in this instance to the city-state of Singapore. A heroin epidemic affecting that country's youth was used to marshal public support for Singapore's antidrug program. Singapore's newly found prosperity was dependent on maintaining a fully employed workforce. The heroin epidemic among young men made drastic governmental action both acceptable and necessary. In about a 3-year period (1974 to 1977), it was estimated that 3 percent of Singapore's young male population had become involved in smoking heroin. Further, it was expected that those figures would continue to grow rapidly. In 1977, the Singapore government established an enforcement policy relying heavily on the commitment of opiate users to the city-state's newly created Drug Rehabilitation Centers.

The Singapore effort included an existing law that provided for a 6-month commitment, without trial, for individuals with urines positive for any illicit drugs. With the advent of a heroin-smoking epidemic, the law was amended to permit the death penalty for major drug traffickers, to create a registry of heroin users, and to open six rehabilitation centers. Most important to the Singapore effort was Operation Ferret, which was initiated in 1977. That effort involved the arrest of large numbers of suspected heroin users. Urine specimens were obtained, and arrestees who tested positive were forcibly referred to rehabilitation centers.

McGlothlin (1980) reports that nearly 20,000 people were arrested and directed to give urine specimens during the first 9 months of Operation Ferret. He also indicates that 40 percent were found positive for drugs, overwhelmingly heroin, and those found to be positive were sent to rehabilitation centers for 6-month periods. The goals for this dramatic action were to slow the spread of heroin smoking through the youthful population and to modify the behavior of persons already invested in heroin smoking.

The treatment approach, as described by McGlothlin, consisted of cold turkey withdrawal efforts to instill discipline in terms of work behavior, as well as an exercise and a personal care regimen: education regarding the individual's responsibilities to society and about the evils of drug use; schooling and job training as warranted: and religious and personal counseling. In addition, a 2-year period of compulsory supervision after discharge from the rehabilitation center was required. That supervision involved urine testing and visits to home and work, as well as some limited counseling (up to 10 minutes each visit).

McGlothlin concludes that using the adopted measures achieved the objective of arresting the Singapore epidemic. The number of commitments to rehabilitation centers dropped from 700 cases a month in 1977 to under 200 a month in 1979, while new users were being added to the registry at a much lower rate than had been the case earlier. Relapse, l-year posttreatment, as measured by returns to treatment and/or convictions, was found to be 37 percent.

McGlothlin reasons that the success of the Singapore program was due to three factors. First, the program could be sold to the public, and was in fact heavily marketed, as an effort to protect and guarantee the country's economic prosperity. The heroin epidemic among youth threatened to remove from the workforce the very persons on whom Singapore's continued prosperity depended. Second, Singapore's size made police activity and surveillance both feasible and effective. As a city-state, there was permitted a greater cooperation of enforcement agencies than might be possible in a larger geographic area. Finally, the government in power had more than 15 years of popular administration by the time a drug crisis was recognized and, in McGlothin's words, had established "one of the most closely regulated societies in South East Asia" (McGlothlin 1980 p. 12).

While McGlothlin takes care to relate the utility of civil commitment measures to the political climate and geography of the area affected, one may take some issue with the degree of success reportedly achieved in Singapore, at least insofar as that success is interpreted from the decrease in cases referred to treatment. The diminution in cases referred to rehabilitation centers, even assuming the same aggressive zeal attached to Operation Ferret 2 years after its initiation, must be understood in terms of the high level of success likely with a new operation involving, in significant part, a "creaming" of naive addicts. Certainly, any new operation of this

type can be presumed to enjoy a greater degree of success in its beginning stages than it will even a short time later. Thus, it is impossible to know to what extent the reduced rate of treatment referral reflects reduced use of heroin, as opposed to an increased capacity to use heroin covertly. Similarly, a relapse rate of 37 percent, while again suggesting success of the commitment/surveillance program, must be interpreted with some caution, since the only outcome data available to McGlothlin were returns to treatment or convictions. While the close supervision of rehabilitation center releasees argues for the accuracy of those figures, McGlothlin himself raises the specter of a switching to other drugs not tested (as of 1979) in supervisees' urine specimens. One can again posit that heroin users also became more expert at hiding their drug use from the authorities.

Nonetheless, while arguing about the degree of success, it seems clear that civil commitment and related enforcement practices in Singapore achieved the desired goal of containing the heroin crisis. That is, the procedures achieved the societal objective of permitting Singapore's continued economic growth and prosperity. Again, civil commitment was justified as necessary to the well-functioning of the society. A health issue could be seen as carrying a threat sufficient to demand social-control behaviors.

THE SPECIAL CASE OF AIDS

In that context, it is interesting to consider Connell's address to the Annual Meeting of the Society for the Study of Addiction, in London, in November 1985 (Connell 1986). Connell notes the opportunities available to manage and treat addiction problems in the United Kingdom, but raises, as a potential and dramatic threat to British efforts, the likely emergence of AIDS in the United Kingdom. Connell himself makes no mention of civil commitment or of any policy initiative in relation to AIDS. It is, for Connell, simply an issue about which his colleagues should be aware. Nonetheless, we can raise the question as to whether AIDS has the potential to encourage civil commitment practices directed toward intravenous drug users in at least some parts of the world. Given that AIDS is a lethal disease spread, in significant part, through the sharing of needles by intravenous drug users, there would certainly appear to be potential for marshaling public support in response to a clear and dramatic health risk. Moreover, it can be argued that the risk of AIDS will not stay long and, indeed, is not staying exclusively in traditionally pariah populations, e.g., gays and drug users. Again, at

least in the United States, AIDS has edged its way into the heterosexual population, and, to the extent it has, the origins of the disease have been largely traceable to the sexual activity of addicts. Similarly, the intravenous drug user has been viewed as largely responsible for cases of pediatric AIDS. There are, of course, many constraints on national policy and behavior in relationship to any threat, including that posed by AIDS. Certainly one such constraint is that the health risk is not viewed as of sufficient moment to society or, if one will, to the heterosexual society, to warrant social-control measures. If that threat increases, given the availability of commitment procedures specific to a population many feel they already have reason to disparage, civil commitment may become a policy for serious consideration.

CONDITIONS NECESSARY TO IMPLEMENT CIVIL COMMITMENT

In summary, the conditions that follow have been described as necessary to implement civil commitment procedures.

- First, and perhaps foremost, there needs to be the appearance of major risk to the larger society by virtue of a subgroup's inappropriate behavior.

- There needs to be the capacity to marshal significant public support for (or, at worst, neutralize public opposition to) containing those behaviors.

- There must be a capacity and/or a technology to identify and to isolate the subgroup with the offending behaviors.

- The offending subgroup must be without sufficient political support or capability to mount a competing political pressure on its own behalf.

- Mechanisms must be available to process, detain, and confine individuals whose behaviors can be seen to be inappropriate and threatening.

- Finally, there should be a belief in the community's ability to develop initiatives that will humanely change individuals' behavior for their own and for society's well-being.

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The Costs of Crime and the Benefits of Drug Abuse Treatment: A Cost-Benefit Analysis Using TOPS Data

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INTRODUCTION

The toll of drug abuse on society is high, both in social and economic terms. Despite increases in Federal and State budgets, the public resources for addressing the problems of drug abuse are still limited. To reduce the high cost of drug abuse, available resources must be allocated for cost-effective public efforts. Allocation of resources requires careful consideration of the probable costs and benefits of alternative public efforts to address the problems. One of the principal efforts to reduce the social cost of drug abuse, particularly the costs attributed to crime, is drug abuse treatment. This paper uses data from the Treatment Outcome Prospective Study (TOPS) to assess the benefits of crime reduction attributable to drug abuse treatment (Hubbard et al. 1984b).

ECONOMIC IMPACT OF DRUG ABUSE

Until recently, the major perceived economic cost of drug abuse was the criminal activity ostensibly motivated by the high cost of addiction to heroin and other expensive drugs. The extensive and still growing literature on the drug/crime link (Gandossy et al. 1980; Ball et al. 1980; Chaiken and Chaiken 1982; Collins et al. 1985; Gropper 1984; Johnston et al. 1985) has spawned a literature on the economic costs to society of drug-related crime (Harwood et al. 1984; Cruze et al. 1981; Rufener et al. 1977; Goldman 1978; Lemkau et al. 1974; Arthur D. Little Company 1974).

The most recent economic-cost study (Harwood et al. 1984) found that Crime-related costs of $18.343 billion were a major part of the estimated $47 billion total cost to society of drug abuse (table 1).

Most of the crime-related costs ($10.2 billion) were attributable to the loss of criminals' potential legitimate productive activity and to the cost of incarceration. Federal drug traffic control efforts totaled $537 million, and other criminal justice system (CJS) expenditures were $4.5 billion. Victim losses from property damage, lost productivity, and homicide were $1.8 billion, and private protection services were $1.3 billion.

TABLE 1. *Economic costs of drug abuse—1980*

Costs of Drug Abuse	Value (dollars in millions)
Crime-Related Costs	
Federal Drug Interdiction	$537
Other Drug-Trafficking CJS	2,178
Other Drug-Related Crime CJS	2,276
Private Protection Services	1,297
Private Legal Services	48
Property Damage	111
Victim (Lost Productivity)	919
Homicide (Lost Productivity)	786
Incarceration of Criminals	1,466
Crime Career	8,725
Subtotal	18,343
Other Costs	
Drug Abuse Treatment	1,200
Other Health Support Services	243
Drug Overdose Deaths	1,194
Reduced Workforce Productivity	25,716
Lost Employment	2 3 8
Subtotal	28,591
Total	46,936

SOURCE: Harwood et al. 1984.

Most of the non-crime-related costs were from reduced productivity in the workforce ($25.7 billion). Other large costs were $1.2 billion for drug abuse treatment and $243 million for other health expenditures including education, prevention, and research.

PERSPECTIVES ON SOCIAL COST

The methodology used to estimate the social cost requires the use of an accepted economic framework. Alternative perspectives on the role of other factors (expenditures on illegal drugs, the value of stolen property, and nonpecuniary effects of crime) need to be carefully considered.

Expenditures on illegal drugs and the value of property stolen by drug abusers are not included in the $47 billion calculation. Estimates of the retail value of illegal drugs consumed in 1979 range from $21 billion to $65 billion (U.S. Department of the Treasury, Internal Revenue Service 1983). The 1980 National Victimization Survey (U.S. Department of Justice, Bureau of Justice Statistics 1984) estimated that $7.3 billion was stolen from all individuals in 1980. The study by Harwood et al. (1984) estimated that $1.5 billion of the $7.3 billion could be attributed to thefts by drug addicts. These values are excluded from the total crime cost estimate to avoid double counting.

The issue of double counting drug expenditures and the income used to purchase the drugs must be handled carefully. These two components are opposite perspectives on the same transaction, and the two values are equal. Therefore, they should not be added together. Each of the drug abuse cost studies cited above avoided the double counting problem by using only the income side of the drug market ledger in making total cost estimates. However, the problem of double counting also arises when calculating the value of stolen property. When property is stolen, it is, in effect, involuntarily transferred from a law-abiding citizen to a criminal. While there is a loss to the victim, the criminal gains. Therefore, there is no net loss to society. Both the value of stolen property and how much is lost in legitimate productivity can also be estimated. These two components, however, are not necessarily equal in value and should not be added together.

It is also widely recognized that crime exacts a greater toll from society than is typically measured in monetary terms. The lives of victims, their families, friends, and neighbors are all disrupted by

fear, shock, pain, and suffering. Articles stolen may have value to the victims far beyond the "market price" of a replacement or the value of the stolen Rem on the street. Although quite real, these dimensions of crime are excluded from consideration in this study (as they are in virtually all studies on the economics of crime) because dollar amounts for their values cannot be estimated.

OBJECTIVES OF THE CURRENT STUDY

The major objective of this study is to estimate the economic benefits of drug abuse treatment in reducing criminal activity of drug abusers during and after treatment. The study also examines whether clients referred to treatment from the CJS demonstrate reduced crime costs during the year following treatment discharge.

This chapter describes the methodology used to calculate the costs and benefits in the established cost-of-illness economic framework. Next, these methodologies are used to calculate costs in the periods before, during, and after treatment for clients participating in TOPS. Specifically, the costs of drug abuse treatment are compared with the savings of lower crime rates. The primary comparison is between the average cost of providing a day of treatment and the reduction in crime-related costs during the year following discharge from treatment. In addition to these basic descriptive tabulations comparing criminal activity costs before, during, and after treatment, the posttreatment economic benefits have been estimated using multivariate regression analysis.

METHODOLOGY

The following sections describe: (1) the data base used to calculate the crime-related costs and benefits; (2) the methodologies used for the calculations; and (3) the potential effects of the quality of the self-report data.

Data Base

TOPS is a longitudinal survey with data on over 11,000 drug abusers admitted to 41 different treatment programs in 10 different cities across the nation. TOPS has been described in detail in Hubbard et al. (1984b). The programs included the major treatment modalities (outpatient methadone, residential, and outpatient drug free). Information from clients and program records was obtained to indicate whether a client was referred to treatment from the criminal

justice system. Records were also checked to determine how long clients stayed in treatment.

All participating clients were interviewed at admission to treatment and during the period of time they received treatment services from the participating TOPS program. Samples of clients were selected for followup interviews at 3 months, 12 months, or 24 months following discharge from treatment. Another sample was reinterviewed 3 to 5 years following admission to treatment. Most of the analyses reported here are based on the 12-month followup sample of clients, although some analysis has been done on the 24-month and 3- to 5-year samples.

The TOPS data base is used for this analysis because it includes detailed information about clients' criminal activity and involvement with the CJS. Self-reports were obtained of aggravated assault, robbery, burglary, theft, auto theft, forgery/embezzlement, fencing, gambling, pimping/prostitution, and drug sales or manufacturing. The data covered the 12 months preceding the admission, each 3-month period during treatment, and the specified periods after treatment termination. The respondents were asked whether they were involved in the illegal activity in each time period and, if so, how many times they did the act. Other important information from the interview was the number of arrests (by type of offense) and days spent in jail or prison in each period.

In addition, respondents were asked about their income from "illegal or possibly illegal sources, such as hustling or dealing," and the amount received. Other questions concerned income from a legitimate job or business, various public assistance programs, family or friends, and expenditures on illicit drugs.

Calculations for Components of Social cost of Drug-Related Crime

This study used the cost framework and methodology developed by Harwood et al. (1984). In that methodology, the cost components are the tangible consequences of drug abuse that can be assigned dollar values. Values were estimated for three explicit kinds of drug-related crime costs: victim costs, CJS costs, and crime career/productivity costs.

- Victim Costs: the value of medical services, property destruction, and lost work and household productivity.

- CJS Costs: the cost of police protection services, prosecution, adjudication, public defense, and corrections services.

- Crime Career/Productivity Losses: the value of legitimate productivity lost because individuals pursued income through predatory or consensual crime.

Each of these types of crime-related impacts or costs involves a loss of resources to the detriment of society's economic well-being. Victim costs from crime include the expense of medical treatment, the value of personal property damaged or destroyed in the crime, victim loss of productivity at work or in the home because of injury or simple inconvenience, and the value of the stolen property.

Crime career/productivity costs include the loss of legitimate productivity when criminals never enter the economy or when they leave it for illegal pursuits such as burglary, theft, drug trafficking, prostitution, or gambling. Such costs also include incarceration costs for drug-related crimes and the loss of opportunity to participate in the legitimate economy.

This study has calculated the value of these costs for the year before admission, the period in treatment, and the appropriate followup year for each drug abuser admitted to treatment. These values were estimated by assignlng average values (costs) to each criminal act the client reported in the interview. Estimates of victim costs per crime (by type of crime) are baaed on the 1979 National Victimization Survey (U.S. Department of Justice, Bureau of Justice Statistics 1983). These average values for medical costs, property damage, loss of productive time, and value of property stolen are in table 2.

CJS costs per crime were calculated for police services, adjudication, and incarceration. Police costs per act were based on an average police cost per arrest in 1979 and adjusted by the probability that a type of crime will result in an arrest. In 1979, total police expenditures In the United States were $17 billion (U.S. Department of Justice, Bureau of Justice Statistics 1981). This value, divided by the 10 million arrests in 1979 (U.S. Department of Justice, Federal Bureau of investigation 1981), indicates average police expenditures of $1,700 per arrest.

Although only a fraction of offenses result in arrests, police incur costs for every offense they are required to investigate. Therefore, the police investigation costs are averaged across the number of

TABLE 2. *Costs to victims per offense*

Type of Offense	Type of Cost (dollars per victimization)			
		Property		Property
			Employment	Stolen
Aggravated Assault	$210	$80	$150	$0
Robbery	50	20	220	300
Burglary	0	30	140	690
Theft	0	10	110	130
Auto Theft	0	100	160	2,670

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics 1984.

offenses per arrests. For example, the Uniform Crime Reports (UCR) reported 500,000 arrests for aggravated assault in 1979, while there were an estimated 4 million assaults according to the National Crime Survey. Therefore, eight assaults occurred for every arrest for assault; average police investigation costs were $212 per aggravated assault (or $1,700 per arrest divided by eight offenses). The results of these calculations for each offense type are presented in table 3.

Crime career/productivity costs are estimated for each drug abuser by calculating the difference between the person's actual self-reported legitimate earnings and an expected or national average for persons of the same age and sex estimated by the Bureau of Labor Statistics. Virtually all drug abusers in this sample had actual earnings below average, both before and after treatment. The proportional deficit in expected productivity was also applied to expected fringe benefits and household productivity.

All values in the following analysis are adjusted for inflation to 1979 dollars, the year of the first TOPS admission cohort.

TABLE 3. *Police investigation costs*

Offense	Value (dollars per self-reported crime)
Aggravated Assault	$290
Robbery	240
Burglary	140
Theft	80
Auto Theft	320
Forgery	110
Fencing	60
Gambling	0.10
Prostitution	0.20
Drug Trafficking	0.20

SOURCE: U.S. Department of Justice, Bureau of Justice Statistics 1984.

Methods of Summarizing Costs

The benefits of treatment can be weighed against the sums of various cost components rather than a single cost component. Two summary measures are described below.

(1) Costs to Society: the value of net losses of goods and services to all of society, including victim losses, CJS costs, and crime career/productivity losses.

(2) Costs to Law-Abiding Citizens: the sum of victim losses plus CJS costs, plus the value of theft.

The cost to society includes costs to victims, CJS costs, and crime career/productivity costs. The value of stolen property is not included in the cost to society because the loss by law-abiding citizens is offset by the gain to law-breaking individuals.

The cost to law-abiding citizens includes victim losses, the value of property stolen, and CJS costs. Crime career/productivity costs are excluded from this measure because foregone legitimate earnings are not a loss to law-abiding citizens, but rather a loss to law-breaking

citizens and their families. While the concept of the cost to law-abiding citizens has appeal, a more complex calculation could include factors such as income subsidies received by drug abusers or their families, taxes, fines, or restitution paid by drug abusers. Because of the complexity of attributing these costs to criminal activity, these values have been excluded from this analysis.

Quality of TOPS Self-Reports of Illegal Activity

The quality of the data on criminal activity needs to be carefully considered in the following analyses. Some clients appeared to exaggerate their level of criminal activity. Others refused to respond to the questions. It was found that a small number of respondents claimed to have committed 500 or more predatory offenses in a year. Criminal activity counts of this magnitude were judged to be unrealistically high, although most of the individuals did appear to be heavily involved in crime. Accordingly, annual activity values for predatory crimes that were greater than 365 were reduced to 365 (one act per day).

The rate of missing data for the pretreatment illegal activity questions was three to four times as high as the rate on the posttreatment questions. One hundred and eighty-four of the 2,420 clients in the l-year followup sample refused to answer the entire section on criminal acts for the pretreatment period, compared to only 67 for the posttreatment period. Nonresponse to selected items of the criminal activity section was much higher, although the 3 to 1 ratio of pretreatment to posttreatment nonresponse was maintained (table 4). Item nonresponse averaged 15 percent for the pretreatment period (ranging from 10 to 20 percent), and about 4.5 percent for the posttreatment period (ranging from 3 to 6 percent).

Several alternative approaches to handling nonresponse were considered. One was to simply exclude any case with missing data. This approach was rejected because too many cases would have been lost. Several different procedures for estimating the level of criminal activity of clients with missing data were also considered. The results of these imputations are presented in table 5. The low imputation for a criminal activity item assumes that nonrespondents were as active on average as those with a valid response (either zero or greater than zero). The high imputation assumes that nonrespondents were as active as respondents who admitted to any offenses on that item. The middle imputation is an average of the low and high imputations. Work by Chaiken and Chaiken (1982) suggests that

TABLE 4. *Criminal activity in the year before and after treatment (2,420 clients)*

Offense	Before Treatment			After Treatment		
	Refusals	Admissions	Total Acts	Refusals	Admissions	Total Acts
Assault	283	216	678	78	168	659
Robbery	310	178	2,124	83	120	740
Burglary	320	296	3,096	88	227	3,554
Theft	387	486	13,544	111	325	9,302
Auto Theft	300	98	505	79	91	1,165
Forgery	315	230	3,977	93	136	2,902
Fencing	346	302	8,098	98	218	5,880
Gambling	377	255	23,244	119	215	14,116
Prostitution	329	159	16,935	100	123	15,776
Drugs	537	547	84,315	146	406	54,715
All Items	184	NA	NA	67	NA	NA
Any of Above	NA	1,161	156,576	NA	917	108,809

TABLE 5. *Effect of alternative nonresponse imputations for self-reported criminal activity on selected estimates in the year after treatment (2,420 clients)*

Level of Imputation	Number of Illegal Acts		Victim Costs		Investigation Costs		Value of Theft	
	(acts and dollars per person per year)							
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
None	65	45	$1,321	$1,045	$1.382	$1,109	$2,431	$2,890
Low	80	47	1,546	1,089	1,618	1,155	2.819	3,002
Mid	114	55	2,061	1,200	2,229	1,289	3,995	3,333
High	145	67	2,723	1,540	3,034	1,700	5,640	4,832

nonrespondents to criminal activity questions are more likely to have committed those acts and at a higher rate than those who admit

criminal activity. The nonresponse problem suggests that pretreatment costs are likely to be greater underestimates than the posttreatment costs and that costs calculated with crime counts will be underestimates.

The approach for handling nonresponse, adopted for all calculations in this report, is to set any missing criminal activity value equal to zero. This yields conservative estimates of the amount and concomitant costs of criminal activity committed by our sample. The magnitude of the nonresponse suggests that values calculated with these data will underestimate costs, and that pretreatment values are likely to be greater underestimates than the posttreatment values.

RESULTS AND DISCUSSION

Virtually all economic measures show that crime is lower after treatment than before. However, the magnitude of the reduction differs considerably, depending on the economic measure. Although the overall effects of drug abuse treatment are important from a programmatic and public policy perspective, the cost benefits of each modality and CJS involvement need to be compared.

The definitions of each cost component used in the analysis are shown in table 6.

Overall Economic Impacts

The initial analyses presented below describe the cost benefits for clients entering outpatient methadone, residential, and outpatient drug-free programs. In the year before treatment admission, crime-related economic costs to society were an average of $15,262 per client and fell to $14,089 in the year after treatment discharge (table 7). This is a reduction of economic impact of only $1 ,173 per client, or about 8 percent. Costs to law-abiding citizens fell from $9,190 per client to $7,379 (about 20 percent).

According to self-reported criminal activity, costs to crime victims fell by about 30 percent (from $1,802 to $1,236), and costs to the CJS fell by about 24 percent (from $3,926 to $3,049). Partially offsetting these reductions was a decrease in productivity from $9,534 to $9,804 (about 3 percent). The productivity loss, or crime career costs, increased slightly even though legal earnings increased from $3,437 to $3,858. The apparent contradiction arises because drug abusers'

earnings did not increase as rapidly as would be expected for non-abusers of the same age. Drug abusers report little improvement in legal earnings—indicating continued low employment levels.

The 20 percent reduction in costs to law-abiding citizens is composed of the reductions in costs to victims and the CJS and in the value of theft from $3,462 to $3,094.

TABLE 6. *Definition of terms*

Cost Components

Drug Expenditures: the self-reported net amount spent on the purchase of drugs for one's own consumption.

Victim Costs: the value of medical services, property destruction, and lost work and household productivity.

CJS Costs: the cost of police protection services, prosecution, adjudication, public defense, and corrections services.

Value of Theft: the estimated value of property or money stolen by the drug abuser.

Illegal Income: the self-reported net dollar amount realized by criminally active individuals from predatory or consensual crime.

Legal Earnings: the amount earned in legitimate employment.

Crime Career/Productivity Losses: the value of legitimate productivity lost because individuals pursue income through predatory or consensual crime.

Summary Estimates

Costs to Law-Abiding Citizens: the sum of victim losses plus CJS costs, plus the value of theft.

Costs to Society: the value of net losses of goods and services to all of society, including victim losses, CJS costs, and crime career/productivity losses.

The reduction in self-reported illegal income of drug abusers from $6,937 per year to $2,546 per year is in strong contrast to the modest improvements estimated above. Furthermore, it was found that before admission drug abusers spent $6,854 per year (about $19 per day) on drugs (table 7) and in the year after treatment $2,687 (or about $8 per day). The close correspondence between drug expenditures and illegal income cannot be ignored. They were virtually

TABLE 7. *Economic impacts of drug abusers 1 year before treatment and 1 year after discharge (2,420 clients)*

	Before Treatment (dollars per person)	After Treatment (dollars per person)
Cost Components		
Drug Expenditures	$6,854	$2,687
Victim	1,802	1,236
CJS	3,926	3,049
Value of Theft	3,462	3,094
Illegal Income	6,937	2,546
Legal Earnings	3,437	3,858
Crime Career/Productivity Losses	9.534	9,804
Summary Estimates		
Costs to Law-Abiding Citizens	9,190	7,379
Costs to Society	15,262	14,089

identical in each period and declined by similar values and proportions. Similar high correlations between drug use and criminal activity were also reported by Ball et al. (1980), Collins et al. (1985), and Johnson et al. (1985).

The inconsistency of our findings on self-reported counts of criminal acts and on self-reported dollar values needs to be examined. The values based on criminal act counts reflect only modest reductions in

costs between pretreatment and posttreatment, while the self-reported dollar values indicate major reductions. We considered three reasons for the apparent inconsistency. First, pretreatment costs may have been underestimated because of the high nonresponse rate in the pretreatment period. Second, the illegal income estimate includes "receipts" from all kinds of illegal activity, not simply predatory crime. Drug abusers may have reduced involvement in consensual crime proportionately more than in predatory crime. Finally, drug abusers may have engaged in less lucrative crimes during the followup period by stealing smaller amounts or making smaller drug deals in an attempt to reduce their risk of arrest and incarceration. Resolution of these issues would require more detailed data in both treatment outcome studies and ethnographic observations.

Effects of CJS Involvement

Clients referred to drug abuse treatment by the CJS (CJS referrals) are different than other criminally active but self-referred clients. One major difference is that the CJS refers clients primarily to residential and outpatient drug-free treatment. The results of this section are based solely on clients entering TOPS residential and outpatient drug-free treatment. The CJS referrals generally cost society and law-abiding citizens more than the self-referrals in both the pre- and posttreatment periods. This was largely because CJS referrals admitted significantly more crimes (and the corresponding victim, CJS, and theft costs) than the self-referrals.

Clients treated in residential facilities had appreciable reductions in crime-related economic costs from the year before admission to the year after discharge. This is true both for individuals referred from the CJS and for self-referrals. The CJS referrals imposed costs on law-abiding citizens of $17,392 per year in the 12 months before admission to the TOPS treatment episode and $10,963 in the year after discharge, a 35 percent reduction (table 8). In contrast, the self-referrals had pretreatment costs of $11,123, which fell to $4,641 after discharge, a 60 percent reduction. Although the CJS referrals reduced their costs by about as much as the self-referrals, the proportional decrease was smaller due to their greater costs before intake. The same pattern holds true for changes in costs to society.

In contrast to residential treatment, outpatient drug-free treatment seems to have relatively small cost-reduction benefits. The CJS referrals had costs to law-abiding citizens of $4,595 before treatment and $4,108 after treatment, a reduction of about 11 percent (table 9).

The costs for self-referrals actually rose from $4,227 per year before treatment to $5,343 after treatment. The reductions in costs to society for both CJS referrals and self-referrals were modest (4 percent and 10 percent, respectively).

The types of individuals entering residential treatment are quite different from those entering outpatient drug-free treatment. The residential clients have much higher criminal costs both before and after treatment than the outpatient drug-free clients. Although the costs for residential clients improved substantially between the pre- and posttreatment years, in the year after treatment the residential

TABLE 8. *Average economic impacts of drug abusers in the year before treatment end the year after discharge from residential treatment by source of referral (2,420 clients)*

	CJS Referrals (dollars per person)		Criminally Active Self-Referred (dollars per person)	
	Before Treatment	After Treatment	Before Treatment	After Treatment
Cost Components				
Drug Expenditures	$5,398	$2,666	$7,965	$2,852
Victim[1,2]	3,045	1,795	2,968	928
CJS[1,2]	7,137	4,778	3,550	2,093
Theft[1]	7,210	4,392	4,605	1,620
Illegal Income	6,799	3,747	9,932	2,444
Legal Earnings	2,601	2,940	3,056	3,054
Crime Career[2]	10,239	10,758	9,852	10,672
Summary Estimates				
Costs to Law Abiders	17,392	10,983	11,123	4,841
Costs to Society	20,421	17,329	16,370	13,693

[1]The sum of these items equals the costs to law abiders.

[2]The sum of these items equals the costs to society.

CJS referrals still had significantly higher costs to law-abiding citizens than the outpatient drug-free CJS referrals had. Self-referrals in residential treatment had somewhat lower posttreatment costs than outpatient drug-free self-referrals.

TABLE 9. *Average economic impacts of drug abusers in the year before treatment and the year after discharge from outpatient drug-free treatment by source of referral (2,420 clients)*

	CJS Referrals (dollars per person)		Criminally Active Self-Referred (dollars per person)	
	Before Treatment	After Treatment	Before Treatment	After Treatment
Cost Components				
Drug Expenditures	$1,911	$1,592	$3,853	$2,429
Victim[1,2]	647	608	1,266	1,006
CJS[1,2]	2,621	2,239	1,498	1,551
Theft[1]	1,327	1,261	1,463	2,786
Illegal Income	2,743	2,140	3,411	1,406
Legal Earnings	4,543	5,311	3,849	5,223
Crime Career[2]	7,484	7,467	5,929	5,227
Summary Estimates				
Costs to Law Abiders	4,595	4,108	4,227	5,343
Costs to Society	10,752	10,314	8,693	7,764

[1]The sum of these items equals the costs to law abiders.

[2]The sum of these items equals the costs to society.

Cost-Benefit Ratios of Treatment

Residential treatment is more expensive than outpatient drug-free treatment and yields greater reductions in costs from the pre- to posttreatment periods. According to special tabulations from the 1979 National Drug and Alcohol Treatment Utilization Survey (NDATUS),

residential treatment costs three times as much as outpatient drug-free treatment: $18.50 per day compared to $6.00 per day. In TOPS, the average residential treatment stay was 159 days, for a total episode cost of $2941.50. The average outpatient drug-free episode was 101 days, for an average cost of $606 per episode.

The average residential treatment episode cost $3,000 and yielded a reduction of $6,000 in the costs to law-abiding citizens for both CJS and self-referrals. Outpatient drug-free treatment cost $600 and yielded a $500 reduction for CJS referrals and a $900 increase for self-referrals. Residential treatment produced benefits to society of about $3,000 per client for both CJS and self-referrals with treatment costs of about $3,000. Outpatient drug-free treatment produced benefits of $450 for CJS referrals and $900 for self-referrals with treatment costs of $600.

The ratio of benefits, i.e., reduction in costs, to the expense of providing the treatment is strong for residential treatment. The ratio is somewhat weaker (even unfavorable for self-referrals, using the costs to law-abiding citizens measure) for outpatient drug-free treatment. Note, however, that residential clients are significantly more criminally active on average than outpatient drug-free clients. It is not reasonable to judge the relative efficacy of the two treatment modalities without a much more thorough and sophisticated analysis. At this time, it may be sufficient to state that there are notable economic benefits from drug abuse treatment and that these benefits generally compare favorably with the cost of treatment in the respective modalities. A positive cost-benefit ratio was obtained in residential treatment and a breakeven was obtained for outpatient drug-free treatment by the first year after treatment.

Modeling the Posttreatment Economic Benefits

Regression analyses were used to examine the correlates of crime costs for outpatient methadone, residential, and outpatient drug-free modalities for the 12 months after treatment. These analyses were also used to estimate posttreatment benefits. In addition to estimating the economic benefits from increased length of stay, the models also examined the effects of previous treatment episodes, pretreatment involvement in crime, and CJS involvement at entry into treatment. In addition, sociodemographic (sex, age, race, and education) and pretreatment drug use variables were included in the models.

Notable findings from these regression analyses were as follows.

- Previous treatment involvement was not significantly associated with crime costs to society in the year after residential or outpatient drug-free treatment. More previous treatment before outpatient drug-free treatment was associated with &favorable crime costs to law-abiding citizens, i.e., higher costs in the year after treatment.

- High pretreatment crime costs were associated with less favorable (higher) crime costs to law-abiding citizens per day of treatment in the year after outpatient methadone treatment.

- CJS-involved residential clients had less favorable (higher) posttreatment crime costs than residential clients not legally referred or involved. Crime cost benefits were substantial for legally referred or involved clients, but such clients had to stay in treatment longer than clients not legally involved to accumulate the same crime cost savings.

- The most consistent correlate of favorable crime cost outcomes was time spent in treatment; longer stays are associated with lower posttreatment crime costs.

The above results are not definitive comparisons of the effectiveness for the three treatment modalities because separate models were estimated for each modality. The findings of this research need to be replicated elsewhere before these recommendations can be made with confidence.

However, the same variables were included in each model, and the following suggestions are based on the results.

- The referral of those with extensive previous treatment experience to outpatient drug-free treatment should be carefully assessed.

- The referral of clients heavily involved in criminal activity to outpatient methadone treatment should be carefully evaluated.

- Because length of time in treatment is associated with favorable outcomes, clients should be encouraged to continue in treatment for additional months, not weeks.

SUMMARY OF ECONOMIC RETURNS IN THREE TREATMENT MODALITIES

There are positive economic returns to society from drug abuse treatment. Similar conclusions are reached using two measures of these benefits: costs to society (table 10) and costs to law-abiding citizens (table 11). Benefits are estimated for the time clients are in drug treatment and for the 12-month period following their discharge from the TOPS episode.

TABLE 10. *Summary of costs and benefits of drug abuse treatment: benefits in reduced costs to society*

	Treatment Modality (costs and benefits in dollars)		
	Residential	Outpatient Methadone	Outpatient Drug Free
Estimated Costs and Benefits for Each Day of Treatment			
Average Cost of Treatment per Day	$18.50	$6.00	$6.00
Average Benefit per Day While in Treatment	15.77	5.54	7.63
Average Benefit per Day Year After Treatment	21.40	(9.95)*	18.06
Estimated Costs and Benefits for a Treatment Episode of Average Duration			
Average Length of Stay (Days)	159	267	101
Total Cost of Treatment	$2,942	$1,602	$606
Total Benefits in Treatment	2,507	1,479	771
Total Benefits After Treatment	3,403	(2,657)*	1,824

TABLE 10. (Continued)

	Treatment Modality (costs and benefits in dollars)		
	Residential	Outpatient Methadone	Outpatient Drug Free
Total Benefits in Treatment and Year After Treatment	5,926	1,479	2,595
Ratio of Benefits to costs	2.01	0.92	4.28

*Not statistically significant and, therefore, not included In benefits.

Intreatment benefits are estimated as the difference between an individual's costs during treatment and those costs before or after treatment, as hypothesized costs (to society and law-abiding citizens) during treatment were notably lower than either before or after treatment. Posttreatment benefits are estimated from a multivariate regression analysis estimating the returns from increased length of stay. In general, the returns to increased length of stay in treatment are positive and significant both statistically and clinically. For a complete discussion of these analyses see Harwood et al. (1987).

Residential

Residential treatment appears to have the greatest economic return of the three modalities examined in this study. Using the reduction in cost to law-abiding citizens, the return of an additional day's treatment is estimated at $37.62, somewhat higher than the return to society of $21.40 per day. Clients admitted to residential treatment imposed costs on law-abiding citizens of $43.17 per day before treatment. This was only $0.65 per day while in treatment. Alternatively, the cost to society was $53.18 per day before treatment and $33.13 during treatment. By either measure, the economic benefit of the intreatment period was substantial, at $42.52 per day or $20.05 per day, depending on the measure chosen to estimate benefits. A more conservative way of estimating treatment benefits is to compare the intreatment value with costs per day following treatment. This

TABLE 11. *Summary of costs and benefits of drug abuse treatment: benefits in reduced costs to law-abiding citizens*

	Treatment Modality (costs and benefits in dollars)		
	Residential	Outpatient Methadone	Outpatient Drug Free
Estimated Costs and Benefits for Each Day of Treatment			
Average Cost of Treatment per Day	$18.50	$6.00	$6.00
Average Benefit per Day While in Treatment	33.44	13.30	7.65
Average Benefit per Day Year After Treatment	37.62	10.96	(16.40)*
Estimated Costs and Benefits for a Treatment Episode of Average Duration			
Average Length of Stay (Days)	159	267	101
Total Cost of Treatment	$2,942	$1,602	$606
Total Benefits in Treatment	5,317	3,551	773
Total Benefits After Treatment	5,982	2,926	(1,656)*
Total Benefits in Treatment and Year After Treatment	11,299	6,477	773
Ratio of Benefits to Costs	3.84	4.04	1.28

*Not statistically significant and, therefore, not included in benefits.

conservative approach would indicate benefits of $24.36 per day for law-abiding citizens or $11.38 per day for all of society.

A middle estimate of intreatment benefits, using all intreatment analyses, is derived by averaging the high estimate and the conservative estimate. The middle estimates of intreatment benefits are $15.77 in savings to society and $33.44 in savings to law-abiding citizens.

After summing benefits from the intreatment and 12-month posttreatment periods, the return was $71.06 per day in residential treatment, using the costs to law-abiding citizens, or $37.17 per day, using the costs to society. The price paid to achieve these returns was about $18.50 per day of treatment in publicly funded residential treatment facilities in 1979 to 1981 (Allison et al. 1985).

The costs and benefits from a treatment episode in a residential facility are readily summarized (tables 10 and 11). A stay of 159 days (the average for this sample) would incur treatment costs of $2,942. Savings in costs to society would be $2,507 during treatment, and another $3,403 in the year following treatment discharge. Total benefits to society would be $5,926, for a ratio of benefits to costs of 2.01. Savings in costs to law-abiding citizens would be $5,317 during treatment and another $5,982 in the year following discharge. Total benefits would be $11,299, or 3.64 times the cost of the treatment episode.

Outpatient Methadone

The economic returns to outpatient methadone treatment are also positive, although more modest than to residential treatment. The average reduction in cost to law-abiding citizens was $24.26 per day of treatment ($10.96 per day during the followup year, plus $13.30 per day while being treated). The return to society was $7.29 per day while in treatment, but there were no statistically significant benefits to society in the followup year.

The cost of methadone treatment is estimated to be $6 per client day, based on data the TOPS programs provided NDATUS (Allison et al. 1985). These values indicate that society virtually saves its total costs for methadone treatment on the day that it is delivered, and that longer lasting effects are an economic bonus. There were statistically significant benefits to law-abiding citizens in the followup year, although benefits were negligible or even negative for treatment of the most criminally active clients.

The average episode of outpatient methadone treatment for this sample lasted 267 days. Benefits to society for this episode were almost equal to the cost of treatment ($1,479 and $1,602 respectively), and benefits to law-abiding citizens were four times as great as treatment costs ($6,477 and $1,602, respectively). The ratio of benefits to the cost of treatment was 0.92 for the costs-to-society measure and 4.04 for the costs-to-law-abiding-citizens measure.

Outpatient Drug Free

The costs of outpatient drug-free treatment (about $6 per client day) compare very favorably with the benefits estimated in this study. Benefits to law-abiding citizens were $7.65 per day of treatment (all from intreatment benefits); posttreatment benefits were sizeable, although not statistically significant. Benefits to society were even larger, at $25.69 per day of treatment ($7.63 per day while in treatment and $18.06 per day during the followup year).

An average treatment episode for outpatient drug-free services was 101 days for this sample. The cost of treatment for an average stay was about $606, while the benefits were $2,595 and $773 in costs to society and law-abiding citizens, respectively. The ratios of economic benefits to the cost of treatment are 4.28 for costs to society and 1.28 for costs to law-abiding citizens.

CONCLUSION

There are three critical questions that these estimates of benefits raise. The first concerns the expected duration of the treatment effect, the second concerns the relative efficacy of the three treatment modalities, and the third concerns the economic value of simply enrolling in treatment regardless of length of treatment.

The benefits totaled at this point include only the intreatment period and the first year after treatment discharge. While no multivariate estimates have been made, there is reason to believe that treatment effects may last more than 1 year. Some clients are completely rehabilitated through drug treatment, leaving their drug habits and criminal careers behind. Even if it is contended that drug abusers eventually “mature out” of their lifestyle without treatment, the treatment effects estimated in this study indicate that clients who stay in treatment for longer periods are more likely to mature out than those with only short treatment episodes. Consequently, the

intreatment and 1-year followup values estimated in this study are only a partial accounting of benefits.

While this study has estimated economic returns for three different drug abuse treatment modalities, the issue of the relative efficacy for these modalities to treat specific individuals has not been addressed. In other words, issues of "treatment matching" or self-selectivity bias are not included here. Although greater returns are estimated from residential treatment than from methadone or outpatient drug-free treatment in this quasi-experimental study design, there has been no random assignment of clients to modalities or to length of stay. It is not possible to conclude that methadone and outpatient drug-free clients assigned to residential programs would get the same benefits as those observed for residential clients in this study.

Finally, these multivariate estimates of benefits do not indicate the value to society of drug abusers voluntarily deciding to find help for their addiction problem and to seek treatment. There may be crime-reduction benefits to society from this voluntary decision to change the "addict lifestyle," regardless of how long drug abusers stay in treatment. However, the TOPS database can only indirectly address this issue, because no untreated drug abusers are included in the TOPS database. One comparison group may be those who enrolled in treatment and then left very quickly.

Despite the limitations cited above, it appears that there are real returns to society and law-abiding citizens from greater length of stay for CJS referrals. The benefits occur even though CJS referrals are more criminally active than self-referrals in the followup year. Unfortunately, there is no comparison group of drug abusers sent to prison or put on probation without referral to drug treatment.

The findings from this study indicate that there are significant economic benefits associated with drug abuse treatment. Generally, these benefits seem to be at least as great as the expense of each modality. There also appear to be greater crime-reduction benefits accruing to treatment in residential facilities than in methadone or outpatient drug-free programs. Longer term outcomes must be assessed to determine the duration of these different benefits.

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Compulsory Treatment: A Review of Findings

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INTRODUCTION

The current drug abuse treatment system has its roots in a number of initiatives closely related to the criminal justice system (Maddux 1967; Maddux 1978). Specialized treatment (Rasor 1978) for addicts in the United States began with two Public Health Service hospitals which opened at Lexington, KY, in 1935 and at Fort Worth, TX, in 1938. These hospitals treated incarcerated Federal prisoners but voluntary patients were also accepted. However, most voluntary patients did not remain for the entire treatment program. In fact, treatment before passage of Public Law 89-793, 1966, the Narcotic Addict Rehabilitation Act (NARA), did not provide for community aftercare, and followup studies reported an extremely high relapse rate (Vaillant 1966). Vaillant (1966) also concluded that the most significant variable in determining abstinence in the confirmed user was the availability of compulsory parole supervision.

Using State civil commitment programs (e.g., compulsory court-ordered treatment as an alternative to incarceration) from California and New York as models, and the logic from available followup studies (Maddux, this volume), NARA was enacted at the Federal level in 1966. This legislation established a close linkage between the health-care system and the criminal justice system and provided civil commitment to keep addicts in treatment beyond withdrawal. NARA also included community-based followup care after detoxification, initially provided at the Lexington and Fort Worth hospitals, Later, NARA inpatient treatment facilities were established in several major cities. NARA also set the stage for community treatment of narcotic addicts and, subsequently, drug abusers by providing initial funding and developing a group of treatment experts in drug abuse.

A second major effort in the drug abuse criminal justice area was the Treatment Alternatives to Street Crime (TASC), which was established in 1972 by the Special Action Office for Drug Abuse Prevention (SAODAP) and was modeled, in part, on the court referral program developed in Washington, DC. TASC is essentially a diversion program for drug abusers. The program identifies clients, refers them to treatment, and monitors their adjustment. It serves as an "outreach" or "case-finding" function for treatment agencies (Cook et al., this volume).

With the above brief history, the purpose of this volume is to review existing research related to civil commitment and mandatory treatment that might be applied to reduce the spread of the AIDS virus. With that purpose, a specific consensus statement was developed by the participant authors and is included here as written by those who attended the meeting. The consensus suggests that, based on the research that indicates that treatment is effective in reducing intravenous drug abuse and that the length of time in treatment is positively related to treatment success, the criminal justice system is important for identification and retention of drug abusers in treatment.

OVERVIEW OF THE FINDINGS

Using data from a 1974 to 1976 evaluation of the California Civil Addict Program, the efficacy of mandatory treatment and civil commitment was presented by Anglin (this volume). This evaluation of nearly 1,000 addicts who came into the California Civil Addict Program examined the joint effect of civil commitment and methadone maintenance. That cohort was reinterviewed 25 years after admission to the Civil Addict Program.

Using a time series approach, with the dependent variable the percent of time spent using narcotics daily, data from 8 years prior to admission (including an "out of control" period of usually 2 years before admission to treatment) and 11 to 13 years following admission showed significant changes. These changes show that civil commitment has the effect of suppressing daily drug use and criminal involvement. Other outcome variables showed similar but moderate effects corresponding to decreasing drug use and criminal involvement. However, the more prosocial the behavioral outcome, the less dramatic the effect. For example, while significant effects on employment were seen, they were not as dramatic as reductions in antisocial behavior. While most of the changes reported were

moderate, Anglin maintains that a “long tail” of parole should be used to monitor addicts against relapse to addiction. According to this data, supervision without drug testing produced nearly the same results as no supervision, while outpatient supervision and supervision with testing showed major reductions in narcotics use. Therefore, supervised aftercare with objective monitoring is the most important component of civil commitment.

When Anglin examines the cohort in another way, civil commitment reduced daily drug use for three groups—active drug users (showing considerable addiction in the year prior to the interview), inactive drug users (showing minimal addiction in the year prior to the interview), and addicts on methadone maintenance at interview. From these results, it can be concluded that civil commitment is an effective approach for several behavioral types of addicts. However, of the three programs reviewed (the California Civil Addict Program, the New York State Civil Commitment Program, and NARA), only the California program proved to be effective in modifying behaviors. It was suggested that the New York State and NARA programs may not have been as effective because they were administered through agencies other than the criminal justice system.

Reviewing followup studies from the Lexington and Fort Worth Public Health Service Hospitals, Maddux suggests that treatment with legal coercion, when combined with compulsory community followup, produced better outcomes but not vastly different from outcomes for voluntary patients. Drawing on his experience at the Public Health Service hospitals, Maddux also suggests that most opioid users enter treatment with some type of coercion. NARA provided for supervised aftercare following hospitalization at the Lexington and Fort Worth Hospitals. That experience suggests that civil commitment will hold about one-third of narcotic addicts in treatment. It appears that this high attrition may have been related to the intensive psychosocial approach. In addition, disruptive and noncompliant patients were found not suitable for treatment and were quickly released. Further, limited long-term followup research exists that examines coercion and long-term abstinence. Therefore, civil commitment is useful for bringing narcotic addicts into treatment, but it is not treatment and cannot take the place of treatment.

TREATMENT OUTCOME STUDIES

The Treatment Outcome Prospective Study (TOPS) included 12,000 clients in 10 cities; 5 cities also had TASC programs. It must be

noted that in a 3-year study, from 1979 to 1981, only 17 clients were referred to methadone maintenance programs by the criminal justice system. Those clients who were more likely to be referred to treatment by the criminal justice system included: males, younger clients (21 to 25 years old), and those with no prior treatment. While some of the TOPS data were not consistent with the California Civil Addict data, the general conclusions are the same. Although there are cautions, the bottom line from TOPS is that criminal justice referral was effective for many addicts at an early stage in their careers.

In outpatient methadone treatment, less than 3 percent of the TOPS clients (by self-description) were criminal justice system referrals, which contrasts with over 30 percent of the residential and outpatient drug-free clients. Among those clients who self-reported legal status, about 20 percent had some form of involvement with the criminal justice system, although they did not indicate treatment referral by that system. These data are very different from the southern California data which Anglin presented. Further, in some jurisdictions the criminal justice system will not refer clients to methadone maintenance programs because such treatment is viewed only as a continuation of drug use.

TOPS data indicate that young users, ages 21 to 25, were nearly twice as likely to be referred by the criminal justice system than by any other source of referral. Or to put it another way, an active heroin user in treatment is half as likely to have been referred by the criminal justice system. The trend shows a preference for individuals with less severe drug problems to be referred to outpatient drug-free treatment.

TOPS data confirm previous studies that found that criminal justice system-referred clients often stayed in treatment longer, implying stronger motivation. For example, regression coefficients indicate a non-TASC/criminal justice system client would stay in treatment approximately 28 days longer than a client with no criminal justice involvement. Further, a TASC client would remain in treatment nearly twice as long. However, this difference between TASC and criminal justice referrals did not hold for residential treatment clients. Another finding was a lower level of service for criminal justice system referrals in outpatient programs. Looking at an array of six different types of services, clients with no legal involvement tended to receive more services in outpatient drug-free treatment. Again, this differential did not appear in residential treatment. A

possible explanation noted was that clients with no legal involvement tended to have more psychological problems and aggression than criminal justice system-referred clients and, therefore, may be in more need of comprehensive treatment services.

Using a sample of 405 male addicts from the Drug Abuse Reporting Program (DARP), Simpson examines the influence of pretreatment legal status for addicts in their 12-year treatment followup study. Legal status was defined as probation, parole, or awaiting trial. The 405 subjects were divided, 204 with legal status and 201 with no legal status. For this study, legal status was compared to reasons for leaving treatment and to behavioral performance after leaving treatment. With few exceptions, there were no significant relationships between legal status and these selected variables. More specifically, and for each treatment modality (including methadone maintenance, therapeutic community (TC), outpatient drug free, and detoxification), the length of time in treatment, reasons for discharge, and posttreatment outcomes were similar for addicts with legal status and for those with no legal status. However, it should be noted that over 80 percent of the addicts involved in this analysis had one or more prior arrests, and over half had spent time in jail or in prison.

These findings for DARP suggest that legal status at treatment entry is not related to treatment success. Nevertheless, there is evidence from DARP and other treatment evaluation studies that treatment is effective in improving behavioral outcomes. Longitudinal analysis of opioid use patterns over time (Simpson and Marsh 1986) reveal that 25 percent of their sample never returned to daily opiate use during the 12-year followup. In addition, and by year 12, 63 percent of that total sample had not used opiates daily for at least 3 years. Likewise, data from this 12-year followup indicates that, while they were in a treatment program, 50 percent of the sample stopped using opiates. Further, addicts who entered treatment were more often influenced by legal pressures and family concerns. Finally, further examination of the pre-DARP legal status variable reveals that addicts who were admitted to DARP with legal involvement were more likely to report in year 12 that probation, parole, and legal problems had previously been important incentives for entering treatment.

EFFICACY STUDIES

After describing the TASC Program, Cook et al. depicts TASC as a bridge between the criminal justice system and drug abuse treatment

programs. In other words, TASC identifies, assesses, refers, and monitors appropriate drug- and/or alcohol-dependent, nonviolent offenders. Thus, treatment serves as an alternate or supplement to the criminal justice system. Although there is a lack of comprehensive data, several evaluations of TASC (Collins and Allison 1963; Lazar 1976) found that the TASC linkage provided an alternative to incarceration that is less costly, and TASC clients remained in treatment longer. Currently, more than 100 sites in 16 States have TASC programs. Perhaps, most important to the success of TASC is the case-management aspect which "tracks" drug abusers through their drug careers.

Joseph draws upon his experiences and research to present a historical review of selected New York City programs which were developed to combat opiate addiction. After defining probation (community supervision in lieu of incarceration) as well as parole (community supervision after incarceration), he presents research findings from an evaluation study of five probation clinics operated by the New York Office of Probation during the early 1970s. Four of these clinics operated directly within probation offices. Although 53 percent of the 1,000 persons treated from 1970 to 1973 were unemployed, only 10.4 percent of the first 900 admissions were rearrested.

Results from a study of the New York City Addiction Services Agency's Diversion Program revealed a 50 percent retention rate for those patients admitted to methadone maintenance treatment for 12 months in 1973 and also a 60 percent retention in methadone maintenance treatment during 1974. These findings also hold for both TCs and ambulatory drug-free programs. After presenting additional data, Joseph concludes by urging that methadone maintenance treatment can have a number of cost-effective benefits when the New York experience and data are examined.

Inciardi suggests "what not to do" in the area of civil commitment by using his personal experiences in New York with the Narcotics Addiction Control Commission (NACC). Data from a 1956 New York study show that, while under supervision by specially trained parole officers, 45 percent of the parolees refrained from drug use (Diskind and Kronsky 1964). A later study reported 66 percent of the parolees had avoided drug use (Diskind 1967). Inciardi suggests that this data may be misleading, since not all cases were randomly assigned to parole supervision. Instead, selective case assignment was used for those most likely to succeed. Measures of failure were rearrest and/or return to drug use. However, either drug use frequently went

unreported by parole officers, or parolees learned ways to beat drug detection. Finally, due to racial tension in New York during the 1960s many middle-class, white parole officers were out of touch with the areas where the rates of crime and addiction were the highest—the minority neighborhoods.

However, two aspects of the project demonstrated considerable clinical efficacy. First, a special arrangement was made between the parole project and Daytop Village, and from 1965 to 1967 a total of 43 parolees were accepted into Daytop Village for treatment. Although no followup data are available, 16 of the 43 parolees had graduated from Daytop Village by June 1966. The second aspect of the project was a rudimentary approach to multimodality programming. One option of the parole officer was to refer relapsed cases to available, although limited, local programs for treatment.

The New York State Narcotics Control Act of 1966 established the NACC. The resulting civil commitment program, which can probably be described as the largest and most costly in history, allowed addicts to be committed to treatment for 3 to 5 years. Eligibles included those arrested for drug-related crimes, those whose family members petitioned the courts, and volunteers. The treatment process included a period of incarceration followed by community aftercare.

New York purchased facilities from the State Department of Corrections; such facilities provided an environment not conducive to therapeutic treatment. Inciardi concludes by suggesting that if the New York civil commitment experience is used, policymakers should have learned that implementation is important, monitoring must be carefully carried out, and compulsory treatment should utilize existing treatment programs rather than creating a whole new separate system.

Since drug abusers who are using drugs heavily report six times more criminal activity, Wish reports that reducing drug abuse also reduces crime. Therefore, a critical issue is identifying drug-abusing offenders and deciding what to do with those identified. Drug testing for all offenders is important to identify drug users. In addition, testing offenders can help predict community drug-use trends. Wish describes four techniques for identifying drug-using offenders: offender self-report, criminal justice records, urine testing, and radioimmunoassay of hair.

Results from a 1984 study in Manhattan of 6,406 male arrestees who were being held in central booking awaiting arraignment reveal that 95 percent agreed to participate in the confidential research interview and 84 percent provided a voluntary urine specimen for analysis. The most common drug found was cocaine, followed by opiates (21 percent), PCP (12 percent), and methadone (6 percent). Overall, 56 percent were positive for one or more of these drugs and 23 percent were positive for two or more drugs. The self-reported estimates of drug use in the last 24 to 46 hours were about half of what was detected by the urine tests. Female offenders were more likely to test positive for drug use and more likely to self-report serious drug abuse than males. Of the women who were charged with prostitution, 75 percent tested positive for one or more drugs, with intravenous cocaine use in this group at approximately 45 percent. After arrest most prostitutes are on the streets again within several hours.

Referral rates to TCs from the criminal justice system have steadily declined from 50 percent in the mid-1960s to 16 percent in 1985, which indicates that these linkages have been weakened. Using 1974 self-report data, in which success was defined by absence of drug use and arrest as well as having a job or going to school, De Leon reports a success rate of 38 percent. Data from 1971 and 1974 cohorts show that successful outcomes increase with length of time in treatment. Likewise, data from 1970 and 1971 indicate that the length of time in treatment reduces arrest rates for dropouts, although outcomes are slightly better for volunteers than for legal referrals. In addition, as time in treatment increases, the proportion of legal referrals increases. Most TC dropouts occur within the first 120 days, with a peak during the first 15 days.

Recovery from drug abuse is an interactional phenomenon involving the interplay of client factors with nontreatment factors, such as social climate, as well as treatment itself. Interaction of these domains needs to be considered in order to understand recovery. Client factors include two critical areas—external pressure and internal pressure. Legal referrals belong in the external pressure category. A stable recovery cannot be maintained by external (legal) pressure only; motivation and commitment must come from internal pressure. The role of external pressure from this point of view is to influence a person to enter treatment.

Subgroups, including legally referred, legally involved, volunteers with past legal involvement, and volunteers with no legal involvement, should be the focus of future research. It is one thing to

operationally deliver pressure as an action—an individual enters treatment. It is another thing to perceive the pressure in the sense that it is dangerous not to go to treatment and it is dangerous to leave treatment, which may be one of the biggest sources of variance. In addition, legally referred clients may actually be pushed into treatment, but their perception of legal consequences accounts for dropouts among the legally referred clients. These sources of variance need to be better understood to examine civil commitment.

Ball presents information on an ongoing 3-year study of methadone maintenance and drug-free outpatient treatment programs in New York, Philadelphia, and Baltimore. This study examines client characteristics related to treatment success and failure, characteristics of the seven different programs, and the types of services received by clients. Both client outcome and patient services are examined. Clearly, not all methadone programs are the same.

Ball also notes that methadone maintenance is an ambivalent treatment modality, since most programs do not even have names. There is still a lot of controversy about methadone maintenance. Many program staff do not tell their friends that they are working in a methadone program. Because methadone maintenance programs typically consist of three-fourths male clients and one-fourth female clients, the study focuses on males only. The mean number of incarceration years was 4. Roughly 95 percent of clients in the study had prior drug abuse treatment, and three-fourths of those clients had prior methadone maintenance treatment. Since arrests are a poor indicator of actual criminal involvement, “crime days” was used to define the number of days per week on which a client was involved in criminal activity. Specifically, crime days per week during the last addiction period before treatment were approximately 80 percent, or 6 days per week of criminal involvement, indicating a high-crime population. Results show that, after 1 year in methadone maintenance treatment, 77 percent of clients did not use heroin. By comparison, cocaine use shows a major reduction, but some amount of use persists even after 5 years in treatment. Marijuana use also continues, and alcohol use to the point of intoxication remains nearly consistent.

COSTS AND POTENTIAL BENEFITS

Brown examines the costs and benefits of civil commitment from an international perspective but cautions that no hard data exist in this area. The objective of civil commitment is twofold: containment of

objectionable persons, and changing those persons' objectionable behavior. These international differences are largely a matter of degree; different countries have very different ways of implementing civil commitment. There may or may not be an adjudication process. Effectiveness is measured by the reduction of community disruption, and costs can be measured as the toll on civil liberties. In democratic countries, a massive campaign against drug abuse requires clear evidence of public support. For a major intervention program to be successful, especially with reliance on compulsory treatment, the problem must be isolated and enlarged—or, in certain circumstances, even created.

Of the 43 countries studied by Porter et al. (1986), 27 had civil commitment practices. Implementation of civil commitment procedures differs markedly according to whether it comes under mental health legislation or under separate legislation specific to drug abuse. If covered under legislation specific to drug abuse, the rationale for civil commitment may be limited to evidence of dependence/addiction and the need for treatment. Three different types of review authorities can determine whether commitment is appropriate: (1) the court system; (2) existing or specially created government agencies; or (3) a medical agency.

Reporting for the World Health Organization, Porter et al. (1986) made the following recommendations regarding civil commitment: (1) persons who need a short-term emergency commitment for incapacitation due to drug dependence should be immediately released from detention on completion of treatment, that is, completion of detoxification; (2) compulsory civil commitment for other than emergency care is justified only when an effective treatment program as well as adequate and humane facilities are available; (3) the period of confinement should be limited and a person's involuntary status subject to periodic review; and (4) the person concerned should be afforded substantive and procedural rights during the commitment proceedings. Brown concludes by raising the question of whether AIDS has the potential to muster popular support for civil commitment of drug addicts in the United States. He cites constraints on national policy in a democracy and notes that the health risk is not now viewed as a sufficient threat to the heterosexual population.

Harwood identifies resource availability as the major constraint on public efforts, with the present spotlight on both costs and benefits. Before presenting specific study results, Harwood states that his study's objective was to estimate the economic benefits of drug abuse

treatment in reducing intreatment and posttreatment criminal activity of drug abusers, as well as examining reduced-crime costs 1 year after treatment. A 1984 economic-cost study by Harwood estimated the cost of drug abuse at $47 billion in 1980, with crime-related costs representing about $18.3 billion.

Using sample data from TOPS at 12 months, as well as 24 and 48 months, the major conclusion reached was that virtually all economic measures show that crime is lower after treatment than before treatment. Clearly, this finding varies by the measurement used. In addition, when TOPS criminal justice referrals are compared to self-referrals receiving treatment, a significant reduction of primary drug use is seen among criminal justice system referrals in residential treatment. However, alcohol remains a problem for all groups studied, with drinking reported to be heavier or at the same level as before treatment. This finding corresponds with other studies showing positive cost-benefit effects of treatment, especially residential treatment, which has a high cost-benefit ratio.

CONSENSUS STATEMENT REGARDING COMPULSORY TREATMENT

With the above research findings as background, the following consensus recommendations related to compulsory treatment for drug abuse were developed. Except as noted below, there was little controversy concerning these statements. The consensus statements developed by the meeting participants are:

- It is recommended that the term “compulsory treatment” be used rather than “civil commitment” to capture a wider range of possible interventions, since civil commitment is only one type of compulsory treatment. Further, it is essential that candidates for compulsory treatment receive appropriate legal protections.

- While there was considerable discussion, it was tentatively agreed that the type of persons targeted for compulsory treatment should be chronic drug abusers and, more specifically, the drug-abusing offender who would benefit most from treatment. Since it will not be possible to treat everyone who is identified or tests positive for drugs, it will be necessary to examine drug abuse careers and, initially, choose those intravenous drug abusers who pose the greatest threat to themselves and the community.

- Treatment has proven effective in reducing drug abuse and, most specifically, in reducing intravenous drug abuse. Nonetheless, drug dependence is chronic, and repeated interventions will probably be needed for most clients.

- Research has shown that the length of time in treatment is related to treatment success and that long-term client aftercare and monitoring is an essential part of treatment. In addition, research has indicated that compulsory treatment in the form of civil commitment increases treatment retention for intravenous drug abusers.

- Urine testing is an important tool for identifying and monitoring drug use for both the criminal justice system and treatment programs.

- The efficacy of methadone treatment needs to be more clearly presented to personnel in the criminal justice system, since there seems to be a bias against methadone as a treatment approach.

- The TC has a unique role for clients receiving long-term mandatory treatment and should remain an attractive treatment alternative for the judicial system.

- Discussion of compulsory treatment must include the impact of such a policy on the Nation's treatment network. Treatment slots must be readily available, and the treatment offered should include the range of existing treatment modalities—methadone treatment, TC, and drug-free outpatient treatments. Compulsory treatment should not displace the treatment capacity available for other clients.

- The criminal justice system is important for client identification and retention. A strong link needs to be developed at all levels between treatment programs and the criminal justice system. The interface involves education, development of common goals, and inclusion of criminal justice as treatment items in data systems.

- Compulsory treatment cannot be considered a panacea for dealing with the AIDS problem among intravenous drug abusers. Consideration also must be given to other alternatives for curbing the spread of AIDS infection. However, if one of the goals of a compulsory treatment program is to reduce the spread of AIDS infection, there needs to be a greater focus on prostitution. This

recommendation is based upon research that shows that a high proportion of those arrested for prostitution are intravenous drug abusers.

ADVANTAGES AND DISADVANTAGES

The following advantages of compulsory treatment and, more specifically, civil commitment emerged. It is summarized as an approach that:

- helps get drug abusers into treatment;
- appears to keep drug abusers in treatment longer if managed by the treatment system;
- makes treatment available before a crime has been committed;
- is separate from postoffense criminal justice system processing;
- provides clear due-process procedures: and
- has clear treatment goals to contain the addict rather than only providing punishment.

On the other side of the coin, several disadvantages of compulsory treatment/civil commitment were evident. It can be summarized as an approach that:

- incorporates delays in processing;
- would overwhelm treatment facilities unless more funding, facilities, and staff are available;
- many addicts may be unwilling to use or found to be unsuitable for;
- at first Mush appears too costly, however, this is tempered when compared to court and incarceration costs; and
- is too cumbersome administratively.

RECOMMENDATIONS FOR FUTURE RESEARCH

The panel also recommended that research should be encouraged to develop and extend knowledge related to compulsory treatment in the following areas:

- Treatment outcome studies should assess the impact of treatment interventions on criminal activity and should also collect baseline criminal data.

- Treatment outcome studies should incorporate standardized protocols to allow for clear understanding for replication.

- Replication studies should be initiated to reexamine the efficacy of intensive supervision and urine surveillance in reducing drug use for probationers and parolees.

- Diagnostic criteria should be further refined to identify clients who could benefit from compulsory treatment and to match clients to specific treatment approaches.

- Linkage models to strengthen the relationship between the criminal justice system and the treatment system should be further examined.

- Descriptive study, including criteria and use of State civil commitment laws for drug abusers, should be undertaken.

- Cost-benefit studies should be updated and should include criminal justice variables.

- Epidemiological studies that focus on drug abuse should incorporate criminal justice data.

- Secondary data analysis of existing data sets should focus on criminal justice questions.

Finally, it should be emphasized that compulsory treatment might be only one of the many approaches to reducing the spread of AIDS among intravenous drug users and the general population, and that approaches like TASC may be useful in directing intravenous drug users to treatment.

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National Institute on Drug Abuse
NIH Publication No. 94-3713
Formerly DHHS Publication No. (ADM) 88-1578

Printed 1988
Reprinted 1994